# TEACHING LITERACY IN TENNESSEE: UNIT STARTER GRADE 2 ELA UNIT CONNECTED TO LIFE SCIENCE

***Important Note:*** *The Unit Starter provides the foundation for English language arts unit planning in connection with life science. In addition to thoughtful preparation from these resources, there are additional components of the literacy block for which educators will need to plan and prepare. See page 6 for more guidance on planning for other components of the literacy block.*

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**Note:** A student packet with all daily tasks included can be accessed in a separate document entitled: "Grade 2 Student Packet."

## GUIDANCE FOR EDUCATORS

### 1. WHY IS THE DEPARTMENT PROVIDING UNIT STARTERS?

The research is clear: Reading proficiently—especially reading proficiently early—prepares students for life-long success. To support greater reading proficiency among all students in Tennessee, Governor Haslam, the First Lady, and Commissioner McQueen kicked off the Read to be Ready campaign in February 2016 with a goal of having 75 percent of Tennessee third graders reading on grade level by 2025. Together, we are making progress. High-quality texts that meet grade-level expectations are increasingly making their way into classrooms. Students are spending more time reading, listening, and responding to texts that have the potential to build both skills-based and knowledge-based competencies. However, the first year of the initiative has revealed a need for strong resources to support the growing teacher expertise in Tennessee.

In May of 2017, the Tennessee Department of Education released Teaching Literacy in Tennessee. This document outlines the types of opportunities students need to become proficient readers, writers, and thinkers and includes a literacy unit design framework describing the ways that teachers can create these opportunities. This includes building rich learning opportunities around meaningful concepts within the English language arts block where students listen to, read, speak, and write about sets of texts that are worthy of students' time and attention.

The resources found in each of the Teaching Literacy in Tennessee: Unit Starters are intended to support planning for one full unit aligned to the vision for Teaching Literacy in Tennessee. They are intended to serve as a model to reference as educators continue to design units and compare the alignment of lessons to the vision for Teaching Literacy in Tennessee.

### 2. WHAT RESOURCES ARE INCLUDED IN A UNIT STARTER?

The Unit Starters include several of the key components in the framework for Teaching Literacy in Tennessee. These components serve as the foundation for strong unit planning and preparation.

**Content Goals:** Each Unit Starter begins with content goals that articulate the desired results for learners. [Adapted from McTighe, J. & Seif, E. (2011) and Wiggins, G. & McTighe, J. (2013)]

Universal Concept: A concept that bridges all disciplinary and grade-level boundaries. This concept provides educators and students with an organizational framework for connecting knowledge across disciplines into a coherent view of the world.

*Universal Concept Example:* Interdependence

Unit Concept: The unit concept is the application of the universal concept to one or more disciplines. This concept provides students with an organizational framework for connecting knowledge within the disciplines into a coherent view of the world and provides educators with a focus for unit planning.

*Unit Concept Example:* Interdependence of living things

Enduring Understandings and Essential Questions: Enduring understandings are the ideas we want students to understand, not just recall, from deep exploration of our unit concept; and essential questions are the corresponding open-ended questions that will guide students' exploration of these ideas. The enduring understandings reflect the abstract, easily misunderstood, "big" ideas of the discipline. They answer questions like "Why?" "So what?" and "How does this apply beyond the classroom?" to support deep levels of

thinking. These questions spark genuine and relevant inquiry and provoke deep thought and lively discussion that will lead students to new understandings.

*Enduring Understanding Example:* People, plants, and animals depend on each other to survive.
*Essential Question Example:* Why do humans need to preserve trees?

Disciplinary Understandings and Guiding Questions: Disciplinary understandings are the specific ideas and specialized vocabulary of the discipline. These ideas will focus instruction, build disciplinary knowledge, and provide the schema to organize and anchor new words. Student understanding of these content-related ideas is critical to investigation and understanding of the more abstract and transferable ideas outlined in the enduring understandings. Guiding questions are open ended and guide students' exploration of the disciplinary understanding. These questions prompt ways of thinking and support knowledge building within the content areas.

*Disciplinary Understanding Example:* The structure of plants and the function of each part
*Guiding Question Example:* Why are roots important to plants?

The concepts for this set of Unit Starters were derived from the vertical progression of Tennessee's Life Science Standards and focus on plant and animal life. These standards are represented below. **Though strong connections are made to the science standards within the unit, it is critical to note that this Unit Starter does not encompass the totality of the identified science standards. The unit is not intended to replace instruction and hands-on application of the science standards and practices.**

Kindergarten

- K.LS1.1. Use information from observations to identify differences between plants and animals (locomotion, obtainment of food, and take in air/gases).
- K.LS1.2. Recognize differences between living organisms and non-living materials and sort them into groups by observable physical attributes.

Grade 1

- 1.LS1.1 Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants).
- 1.LS1.2 Illustrate and summarize the life cycle of plants.

Grade 2

- 2.LS1.1 Use evidence and observations to explain that many animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air.
- 2.LS1.3 Use simple graphical representations to show that species have unique and diverse life cycles.

Grade 3

- 3.LS1.1 Analyze the internal and external structures that aquatic and land animals and plants have to support survival, growth, behavior, and reproduction.
- 3.LS4.1 Explain the cause and effect relationship between a naturally changing environment and an organism's ability to survive.
  3.LS4.2 Infer that plant and animal adaptations help them survive in land and aquatic biomes.

**Texts for Interactive Read Aloud & Shared Reading**: Each Unit Starter includes a collection of complex texts to

support strong interactive read aloud and shared reading experiences. These texts have been selected to provide regular opportunities for students to engage with rich academic language and build the disciplinary and enduring understandings for the unit. Given the complexity of these texts, teachers should revisit them with students after the initial read(s) to deepen knowledge. Multiple question sequences and tasks are included in the Unit Starter for most texts; however, teachers are encouraged to add additional readings, questions, and tasks as needed to meet the needs of their students. Teachers may also analyze and select additional suitable texts to extend and/or support the development of the unit concepts. *See page 38 in* Teaching Literacy in Tennessee *for the three-part model for determining text complexity: quantitative dimensions of text complexity; qualitative dimensions of text complexity; and reader and task considerations.*

**Suggested Resources for Small Group & Independent Reading**: The Unit Starters include a list of suggested resources (texts, videos, online resources) to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support knowledge building for students and to meet students' diverse learning needs. In addition, teachers are encouraged to select additional resources to extend and/or support the development of the unit concepts.

**End-of-Unit Task**: Each Unit Starter includes an end-of-unit task that provides an opportunity for students to demonstrate their understanding of the unit concept and to answer the essential questions for the unit in an authentic and meaningful context.

**Daily Tasks & Question Sequences:** Each Unit Starter includes a daily task and question sequence for approximately two weeks of instruction. The question sequences integrate the literacy standards to support students in accessing the complex texts during interactive read aloud and shared reading by drawing students' attention to complex features in the text and guiding students toward the disciplinary and/or enduring understandings of the unit.

The daily tasks provide an opportunity for students to demonstrate their new understandings by applying what they have learned from the texts they read daily across the literacy block. The texts and tasks have been carefully sequenced to support students in building disciplinary understandings over the course of the unit, so students are able to successfully engage in the end-of-unit task.

**Sidebar Notes:** As you navigate this document, you will also see that sidebar notes have been included throughout. These notes are intended to: 1) highlight additional rationale that may be of interest to educators; and 2) point out specific changes that have been made to the second iteration of Unit Starters based on feedback from the first set.

## 3. WHAT RESOURCES ARE NOT INCLUDED IN A UNIT STARTER?

These resources provide the foundation for unit planning but are not intended to be a comprehensive curriculum resource. Instead, educators must thoughtfully prepare from the resources that are included in the Unit Starter by adding additional resources as appropriate to meet instructional goals and student needs.

In addition, teachers will need to plan for other components of the English language arts block. The Unit Starters **do not include** the following:

- Instructional guidance for small group and independent reading and writing
    - Students should be grouped flexibly and resources selected to meet specific and unique needs of students, which may change over time.
- Instructional guidance and resources for explicit foundational skills instruction and foundational skills practice in and out of context

- Reading foundational skills instruction should follow a year-long scope and sequence and be responsive to the unique needs of your students.

Please refer to Teaching Literacy in Tennessee for definitions of new or unfamiliar terms used in this document.

## 4. HOW SHOULD I USE THE RESOURCES IN THE UNIT STARTER TO PLAN MY UNIT?

**Interactive Read Aloud and Shared Reading Experiences**
To prepare for the unit, start by thoroughly reviewing the resources that are included in the Unit Starter. These resources are designed to support students in thinking deeply about the unit concepts and the enduring understandings embedded in complex text through interactive read aloud and shared reading experiences. To support this step, a unit preparation protocol and a lesson preparation protocol are included in Appendices A and B.

**Small Group Reading and Writing**
In addition to interactive read aloud and shared reading experiences, plan small group instruction to support the diverse needs of students in your classroom. Group students flexibly and select texts that address students' strengths (e.g., prior knowledge) and meet their specific needs:

Accuracy/word analysis: Some students may need additional practice with foundational reading skills that have already been taught and now are applied to reading authentic texts.

Fluency: Some students may be strong decoders but still struggle to read fluently, which holds them back from successful comprehension.

Comprehension: Some students may require support for their use of comprehension skills and strategies for building knowledge and acquiring academic vocabulary.

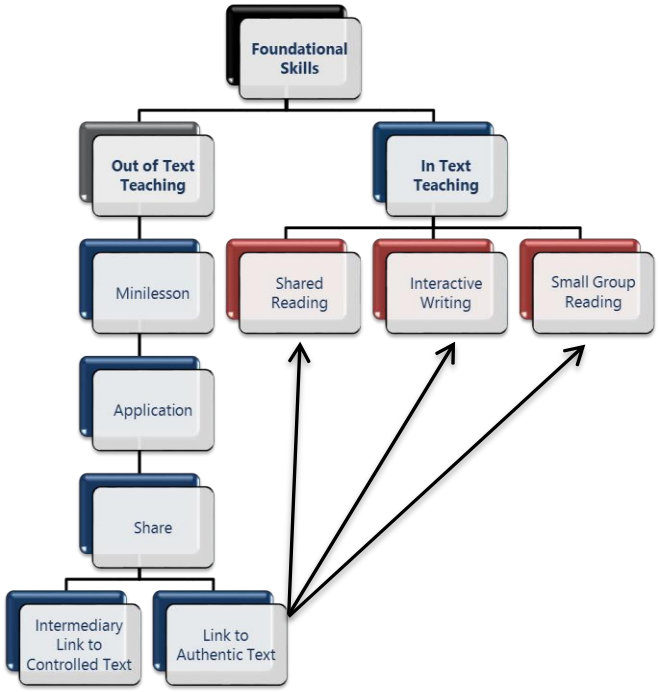
The Unit Starters include a list of suggested resources (texts, videos, online resources) that can be used to support small group instruction.

**Modeled, Shared, and Interactive Writing**
While important for a teacher to use modeled, shared, and interactive writing in order to support student independence with the tasks, please note that the units include few call-outs, if any, for modeled, shared, and interactive writing in the unit. To prepare students for success on the daily and end-of-unit tasks in the Unit Starter, teachers should plan for modeled, shared and interactive writing opportunities. Modeled writing is an instructional strategy where the teacher explicitly demonstrates the writing process for different forms and purposes. Shared writing is an instructional strategy where the teacher and students compose a text together with the teacher acting as the scribe. Interactive writing is an extension of shared writing in which the teacher and students compose a text together with the teacher strategically sharing the pen during the process.

**Independent Reading and Writing**
The Tennessee English Language Arts Standards call for students to read a range of literary and informational texts and to engage in a high volume of reading independently. The standards also call for students to have aligned writing experiences that develop their skills as writers and support their comprehension of rich, complex texts. Plan for how you will use the suggested resources to engage students in a variety of reading and writing experiences. Consider setting up systems for accountability during independent work time such as one-on-one conferences, center assignments, and/or accountable independent reading structures.

*See pages 41-43 in Teaching Literacy in Tennessee for a description of these instructional strategies and their purpose within the literacy block.*

**Explicit Foundational Skills Instruction**
It is recommended that educators consult the Foundational Literacy Standards and use a systematic phonics sequence (often found within a phonics program) for foundational skills instruction in conjunction with the resources in the Unit Starter. Strong foundational skills instruction follows an intentional, research-based progression of foundational skills that incorporates phonological awareness, phonics, and word recognition.




**Foundational Skills Practice Out of Text and In Text**
Strong foundational skills instruction includes opportunities for students to practice their newly acquired skills out of text and in text.

Out-of-text instruction may take the form of mini-lessons and hands-on application through activities, such as word sorts or the use of manipulatives.

In-text instruction provides opportunities across the literacy block for students to further apply their new learning in authentic reading and writing texts. Foundational skills assessments should be ongoing and should be used to determine when students have mastered the skill and are ready to move on to the next skill.

*See pages 78-79 in* Teaching Foundational Skills Through Reading and Writing Coach Training Manual *for more information about the relationship between out-of-text and in-text teaching.*

**Structures for Academic Talk and Collaboration**
The Unit Starters include suggestions for questions and daily tasks, but they do not include guidance on how to structure sharing/discussion time. Consider planning how your students will engage with you and each other when responding to complex text orally or in writing by incorporating things like expectations for talk time, sentence starters, hand signals, etc.

## 5. WHAT MATERIALS DO I NEED TO ORDER AND PRINT?

**Texts for Interactive Read Aloud and Shared Reading**
Each of the texts included in the Unit Starters can be purchased or accessed online or through a local library. A list of these texts is included in the Unit Starter materials. Educators will need to secure, purchase, or print one copy of each text selected to support interactive read aloud experiences. Each student will need a copy of the selected text for the shared reading experiences, unless the text is projected or displayed large enough for all students to read.

**Suggested Texts for Small Group and Independent Reading**
Additionally, each of the texts suggested for small group and independent reading can be purchased or accessed online or through a local library.

**Materials to Be Printed**
The Unit Starters can be accessed digitally here.

Educators may also consider printing:

- **Question Sequence –** Teachers may want to print question sequences or write the questions on sticky notes to have them available during interactive read aloud and shared reading experiences.
- **Daily Task –** Teachers may want to print the teacher directions for the daily task.
- **End-of-Unit Task –** Teachers may want to print the teacher directions for the end-of-unit task.

## UNIT OVERVIEW

The diagram on the next page provides a high-level overview of the unit.

Guidance for the central text and suggested strategy for each day of instruction has been provided in the Unit Starter. It is important to note that this guidance does not reflect a comprehensive literacy block. Educators should support students in developing their expertise as readers and writers by flexibly utilizing a variety of instructional strategies throughout the literacy block.

Educators are also encouraged to use the guidance from this Unit Starter flexibly based on the needs, interests, and prior knowledge of students. For example, teachers may decide to re-read a text, pull in supplementary texts, or provide additional scaffolding based on their knowledge of their students. Teachers are encouraged to be strategic about how many instructional days to spend on this unit.

This Unit Starter is organized around three questions: (1) What are the desired results for learners? (2) How will students demonstrate these desired results? (3) What learning experiences will students need to achieve the desired results?

## UNIT OVERVIEW

### WHAT ARE THE DESIRED RESULTS FOR LEARNERS?

*By the end of this unit, students will have developed an understanding of the following concepts and will be able to answer the following questions.*

**Universal Concepts:**

Cycles, Structures, and Function

**Unit Concepts:**

Life Cycles and Structure and Function of Animals

**Enduring Understandings:**

Animals grow, change, and reproduce in predictable life cycles.

Animals have external structures with specific functions that work together to support survival during the life cycle.

**Essential Questions:**
How do animals grow? How do animals survive?

**Disciplinary Understandings:**
Different species of animals (e.g., mammals, insects) go through stages in unique and diverse life cycles.

We can observe unique and diverse patterns among animal structures (e.g., ears, tails, eyes, wings) and behaviors.

Some structures and functions are common among all animals; other structures and functions are unique to an animal species or kind.

Animals depend on their parts (structures), senses, behaviors, and surroundings for survival and protection.

**Guiding Questions:**
Do all animals have the same life cycle? How do animals look and act? Do all animals meet their needs in the same way? How do animals "stay alive" and of out danger?

### HOW WILL STUDENTS DEMONSTRATE THESE DESIRED RESULTS?

*Students will synthesize their learning from the unit texts and demonstrate understanding in the following authentic and meaningful context.*

**End-of-Unit Task:** You are animal scientist at the zoo. Your job is to teach school groups about animal life cycles and their importance to animal survival. Prepare a copy of your speech and an example of the poster you plan to use with school groups.

- You will create one poster with two different species we have learned about in this unit.
  - Your poster should include an illustration of the life cycle of each species.
  - Next to each stage of your species' life cycle, label the dangers, predators, and how this species protects itself.
- Write your speech. In your speech, be sure to refer to your poster to explain what animal behaviors and characteristics help it survive.
- Present your speech and poster to your "colleagues" as practice and feedback. When you give your speech, be sure to point out the life cycles you drew on your poster.

### WHAT LEARNING EXPERIENCES WILL STUDENTS NEED TO ACHIEVE THE DESIRED RESULTS?

*Students will achieve the desired results as a result of deep exploration of complex texts through interactive read aloud (IRA) and shared reading (SR) experiences with the following texts.*

*What Is a Life Cycle?* (IRA)

*Bats* (SR)

*Nightsong* (IRA)

*Pinduli* (SR)

*Born in the Wild* (IRA)

*A Butterfly Is Patient* (IRA)

*My Awesome Summer by P. Mantis* (SR)

*Into the Sea* (IRA)

*Sea Turtles* (SR)

## UNIT CONTENT GOALS

This Unit Starter was created with several levels of conceptual understanding in mind. Each conceptual level serves an instructional purpose, ranging from a universal concept that bridges disciplinary boundaries to concrete disciplinary understandings that focus instruction around specific schema. The diagram below shows the conceptual levels and questions that were considered during the development of all of the Unit Starters. The diagram on the following page outlines the specific concepts and questions for this Second Grade Unit Starter.

**Universal Concept:** A concept that bridges all disciplinary and grade-level boundaries (i.e., super-superordinate concept). This concept provides students with an organizational framework for connecting knowledge across disciplines into a coherent view of the world. (Example: Interdependence)

**Unit Concept**: The application of the crosscutting concept to one or more disciplines (i.e., superordinate concept). This concept provides students with an organizational framework for connecting knowledge within the disciplines into a coherent view of the world and provides educators with a focus for unit planning. (Example: Interdependence of living things)

**Enduring Understandings**: The ideas we want students to understand, not just recall, from deep exploration of our unit concept. The enduring understandings reflect the abstract, easily misunderstood, "big" ideas of the discipline. They answer questions like "Why?" "So what?" and "How does this apply beyond the classroom?" to support deep levels of thinking. (Example: People, plants, and animals depend on each other to survive.)

**Essential Questions**: Open-ended questions that guide students' exploration of the enduring understandings or "big" ideas of the discipline. These questions spark genuine and relevant inquiry and provoke deep thought and lively discussion that will lead students to new understandings. (Example: Why do humans need to preserve trees?)

**Disciplinary Understandings**: The specific ideas and specialized vocabulary of the discipline. These ideas will focus instruction, build disciplinary knowledge, and provide the schema to organize and anchor new words. Student understanding of these key ideas is critical to investigation and understanding of the more abstract and transferable ideas outlined in the enduring understandings. (Example: The structure of plants and the function of each part)

**Guiding Questions**: Open-ended questions that guide students' exploration of the disciplinary understandings in the unit and refer specifically to the domain (e.g., ecosystems). These questions prompt ways of thinking and perceiving that are the province of the expert. (Example: Why are roots important to plants?)

## UNIT CONTENT GOALS

The diagram below outlines the specific concepts and questions for the Second Grade Unit Starter.

**Universal Concept:**
Cycles, Structure, & Function

**Unit Concept:**
Life Cycles and Structure and Function of Animals

| | |
|---|---|
| **Enduring Understanding**<br>Animals grow, change, and reproduce in predictable life cycles. | **Enduring Understanding**<br>Animals have external **structures** with specific **functions** that work together to support survival during the life cycle. |
| **Essential Question**<br>How do animals grow? | **Essential Question**<br>How do animals survive? |
| **Disciplinary Understanding**<br>Different species of animals (e.g., mammals, insects) go through stages in unique and diverse life cycles. | **Disciplinary Understanding**<br>We can observe unique and diverse patterns among animal structures (e.g., ears, tails, eyes, wings) and behaviors. |
| **Guiding Question**<br>Do all animals have the same life cycle? | **Guiding Question**<br>How do animals look and act? |

| | |
|---|---|
| **Disciplinary Understanding**<br>Some structures and functions are common among all animals; other structures and functions are unique to an animal species or kind. | **Disciplinary Understanding**<br>Animals depend on their parts (structures), senses, behaviors, and surroundings for survival and protection. |
| **Guiding Question**<br>Do all animals meet their needs in the same way? | **Guiding Question**<br>How do animals "stay alive" and of out danger? |

**2. LS2.1** Use evidence and observations to explain that many animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air.

**2.LS1.3** Use simple graphical representations to show that species have unique and diverse life cycles.

## UNIT STANDARDS

The questions and tasks outlined in this Unit Starter are connected to the following Tennessee English Language Arts and Science Standards. As you will see later in the Unit Starter, the question sequences and tasks for each text integrate multiple literacy standards to support students in accessing the rich content contained in the texts.

### ALIGNED STANDARDS: INFORMATIONAL TEXT

2.RI.KID.1: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

2.RI.KID.3: Describe the connections between a series of historical events, scientific ideas or steps in a process in a text.

2.RI.CS.4: Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

2.RI.IKI.7: Identify and explain how illustrations and words contribute to and clarify a text.

2.RI.IKI.8: Describe how reasons support specific points an author makes in a text.

2.RI.IKI.9: Compare and contrast the most important points presented by two texts on the same topic.

2.RI.RRTC.10: Read and comprehend stories and informational texts throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

### ALIGNED STANDARDS: LITERATURE

2.RL.KID.1: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

2.RL.KID.3: Describe how characters in a story respond to major events and challenges.

2.RL.CS.4: Describe how words and phrases supply meaning in a story, poem, or song.

2.RL.RRTC.10: Read and comprehend stories and poems throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

### ALIGNED STANDARDS: WRITING

2.W.TTP.2: Write informative/explanatory texts. (a.) Introduce a topic. (b.) Use facts and definitions to provide information. (c.) Provide a concluding statement or section.

2.W.TTP.3: Write narratives recounting an event or short sequence of events. (a.) Include details to describe actions, thoughts, and feelings. (b.) Use time order words to signal event order. (c.) Provide a sense of closure.
2.W.RBPK.7: Participate in shared research and writing projects, such as exploring a number of books on a single topic or engaging in science experiments to produce a report.

2.W.RBPK.8: Recall information from experiences or gather information from provided sources to answer a question.

2.W.RW.10: With guidance and support from adults, engage routinely in writing activities to promote writing fluency.

## ALIGNED STANDARDS: SPEAKING & LISTENING

2.SL.PKI.5: Add audio or visual elements to stories or recounts of experiences, when appropriate, to clarify ideas, thoughts, and feelings.

2.SL.CC.1: Participate with varied peers and adults in collaborative conversations in small or large groups about appropriate 2nd grade topics and texts.

2.SL.CC.2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2.SL.CC.3: Ask and answer questions about what a speaker says in order to gather information or clarify something that is not understood. (Students could ask for question and answers from the peer groups they present to).

## ALIGNED STANDARDS: SCIENCE

2.LS1.1 Use evidence and observations to explain that many animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air.

2.LS1.3 Use simple graphical representations to show that species have unique and diverse life cycles.

## TEXTS FOR INTERACTIVE READ ALOUD & SHARED READING

These texts have been selected to provide regular opportunities for students to engage with rich academic language and to build the disciplinary and enduring understandings for the unit. They have been vetted for quality and complexity to support strong interactive read aloud and shared reading experiences.

The texts selected for interactive read aloud are intended to build students' comprehension of vocabulary, rich characters, engaging plots, and deep concepts and ideas across a variety of genres. These texts will typically be 1-3 grade levels above what students can read on their own.

The texts selected for shared reading are intended to provide opportunities for students to practice newly acquired foundational skills, develop reading fluency, and build knowledge across a variety of genres. Shared reading texts should be appropriately complex text so that students can read with teacher guidance and support. Teachers will need to take the grade level and time of year into account when deciding if the shared reading texts are appropriate for their students. Teachers will also need to consider students' current abilities and the pace at which students need to grow to meet or exceed grade-level expectations by the end of the year. If the shared reading texts included in the Unit Starter are not appropriate for the specific group of students and time of year, educators are encouraged to make an informed decision about selecting a different text for shared reading. The shared reading texts in this Unit Starter are appropriate for instruction closer to the end of the academic school year. Later in the Unit Starter, you will see an example of different texts that may be more appropriate for different times of the year.

While preparing for instruction, educators are urged to carefully consider the needs and interests of the readers, including how to foster and sustain new interests, and to be strategic about the types of tasks that will support readers in deeply engaging with these rich texts. Teachers should also consider how they will make connections to students' prior knowledge and students' cultural and previous academic experiences. Teachers need to consider the vocabulary demands of the text and the level of support readers will need to deeply understand the text.

| TITLE | AUTHOR |
|---|---|
| *What Is a Life Cycle?* | Bobbie Kalman |
| *Bats* | Gail Gibbons |
| *Nightsong* | Ari Berk |
| *Pinduli* | Janell Cannon |
| *Born in the Wild: Baby Mammals and Their Parents* | Lita Judge |
| *Into the Sea* | Brenda Z. Guiberson |
| *Sea Turtles* | Gail Gibbons |
| *A Butterfly is Patient* | Dianna Hutts Aston |
| *My Awesome Summer by P. Mantis* | Paul Meisel |

## SUGGESTED RESOURCES FOR SMALL GROUP & INDEPENDENT READING

These resources can be used to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support knowledge building for students and to meet students' diverse learning needs.

| TITLE (TEXTS, VIDEOS, & ELECTRONIC RESOURCES) | AUTHOR |
|---|---|
| *Wolves* | Gail Gibbons |
| *Sea Turtle Hatchlings* | Ruth Owen (available on EPIC) |
| *One Tiny Turtle* | Nicola Davies |
| *Mister Seahorse* | Eric Carle |
| *Platypus, Probably* | Sneed Collard III |
| *Seahorse Read and Wonder: The Shyest Fish in the Sea* | Chris Butterworth |
| *A Mother's Journey* | Sandra Markle (available on EPIC) |
| *The Life Cycle of a Penguin* | Colleen Sexton |
| *Penguin Chick* | Betty Tatham and Helen K. Davie |
| *Butterfly: How Does It Grow?* | Jinny Johnson |
| *Monarch Butterfly* | Gail Gibbons |
| *From Caterpillar to Butterfly: Let's-Read-and-Find-Out Science* | Deborah Heiligman |
| *A Nest Full of Eggs* | Priscilla Belz Jenkins |
| "Frogs" | Unit from Achieve the Core: https://achievethecore.org/page/2436/frogs |

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|---|---|
| "Animal Adaptations" | Unit from Achieve the Core: https://achievethecore.org/page/2899/animal-adaptations |
| *Frog (How Does It Grow?)* | Jinny Johnson |
| Lesson 6: "Which Came First, the Chicken or the Egg?"<br>Lesson 7: "The Life Cycle of a Frog"<br>Lesson 8: "The Life Cycle of a Butterfly 101" | CKLA Unit: https://www.coreknowledge.org/free-resource/ckla-domain-06-cycles-nature/ |
| *Animal Defenses* | Etta Kaner |
| *What If You Had Animal Hair?* | Sandra Markle |
| *Animal Life Cycles: Growing and Changing* | Bobbie Kalman |
| *Animal Life Cycles video* | http://www.watchknowlearn.org/Video.aspx?VideoID=25575&CategoryID=6721 |
| *Monarch Butterfly Life Cycle video* | http://www.watchknowlearn.org/Video.aspx?VideoID=25575&CategoryID=6721 |
| Various learning videos such as the "Did You Know" series by Encyclopedia Britannica, Animal Wonders, Inc., and National Geographic Kids | https://www.getepic.com/app/ |

## UNIT VOCABULARY

The following list contains vocabulary words from the interactive read aloud and shared reading texts that warrant instructional time and attention. Teachers should attend to these words **as they are encountered in the texts** to build students' vocabulary and to deepen their understanding of the unit concepts. Educators are encouraged to identify vocabulary that might be unfamiliar to students and to determine how they will teach those words (implicit, embedded, or explicit instruction) based on knowledge of their students. See Appendix C for an example routine for explicit vocabulary instruction.

**Note:** In addition to this comprehensive list, each question sequence lists the newly introduced vocabulary words that warrant instructional time and attention during the specific reading. These lists also provide guidance as to how the specific words could be taught.

**Educators are also encouraged to dedicate a space in their classrooms to record unit vocabulary.** This will provide a reference point for the students as they read, write, and talk about the unit topics. Through repeated attention to these words over the course of the unit, students will develop their understanding of these words and will begin to use them in speaking and writing activities.

| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---|---|---|---|---|
| life cycle<br>stages<br>organism<br>offspring<br>reproducing<br>mammal<br>metamorphosis<br>molt<br>predator | roosts<br>migrate<br>echolocation<br>hibernating<br>mammals | chanted<br>margins<br>strand<br>kin | prickly<br>mane<br>ravenous | regurgitate<br>stimulation<br>inseparable<br>nurturing<br>reassurance |
| **Day 6** | **Day 7** | **Day 8** | **Day 9** | **Day10** |
| larva<br>chrysalis<br>compete | emerge | migrate<br>scales<br>camouflage | aphids<br>shed | hatchling<br>leathery<br>current<br>instinctive<br>familiar |
| **Day 11** | | | | |
| extinct<br>clutch<br>nesting beach | | | | |

## *WHAT IS A LIFE CYCLE?* - READING 1, QUESTION SEQUENCE 1, DAILY TASK 1

| TEXT |
|---|
| **Text:** *What Is a Life Cycle?*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Interactive Read Aloud |

**Note:** In many cases, multiple question sequences are included for one text. These sequences intentionally build on each other in service of deepening students' analysis of the text and understanding of the unit's disciplinary and enduring understandings. Teachers may also decide to read the text in its entirety prior to asking questions.

**Note:** Each instructional strategy has a different purpose. Interactive read aloud is a time for students to actively listen and respond to above-grade-level complex text. The texts selected for interactive read aloud are intended to build students' comprehension of vocabulary, rich characters, engaging plots, and deep concepts and ideas across a variety of genres. These texts will typically be 1-3 grade levels above what students can read on their own. Shared reading is an interactive experience in which students join in the reading of an appropriately complex text with teacher support. Texts used for shared reading are texts that students can read with teacher support. The purpose of shared reading is to provide opportunities for students to practice their newly acquired foundational skills, develop reading fluency, and build knowledge. These texts should be chosen by considering students' current abilities and the pace at which they need to grow to end the year meeting or exceeding grade-level expectations.

| TEXT COMPLEXITY ANALYSIS |
|---|
| **QUANTITATIVE COMPLEXITY MEASURES** |
| 820L |
| **QUALITATIVE COMPLEXITY MEASURES** |

| TEXT STRUCTURE | LANGUAGE FEATURES |
|---|---|
| The text structure is very complex. The text is an informational text with many text features, including a table of contents, headings, photos, and several diagrams with explanations. An effective use of these text features is integral to understanding this text. | The language features are very complex. The text has many complex sentences containing subordinate phrases, clauses, or transition words. The majority of sentences are compound scientific concepts and vocabulary. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of the text is slightly complex. Purpose is explicitly stated, clear, concrete, and narrowly focused. The book is very clearly divided into topics, and each topic is narrowly focused upon within those pages. | The knowledge demands for this text are very complex. It relies on moderate levels of discipline-specific or theoretical knowledge and includes a mix of recognizable ideas and challenging abstract concepts. It includes some references and allusions to other texts, outside ideas, and theories. Students will need to have some knowledge of animal classifications and habitats to fully engage with the text. |

## LESSON OBJECTIVE(S) FOR THIS READING

**Note:** The lesson objectives for each reading articulate the integrated understandings, including ELA, disciplinary, and enduring understandings, students will grasp and/or build on as a result of engaging with the text. The question sequence for each reading will draw students' attention to complex features of the text that will support or challenge students. Over the course of the unit, the lesson objectives for each reading build intentionally on one another to provide a coherent learning experience for students. This coherence is also supported through the intentional sequence of texts.

**Day 1 – Pages 4-5, 22-25.**

During this reading, students will understand that there is a basic life cycle that happens in all species and is integral to sustain life. Students will then learn specifically about the mammal life cycle.

In today's reading, students will:

- cite evidence to support their developing thinking about life cycles;
- explain connections among stages in a process called a life cycle;
- read and make meaning of the question *What is a Life Cycle?*;
- participate with peers and adults in collaborative conversations in small or large groups about life cycles; and
- produce clear and coherent writing related to life cycles in which the development, organization, and style are appropriate to task, purpose, and audience.

## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- life cycle (explicit)
- stages (explicit)
- organism (explicit)
- offspring (embedded)
- reproducing (embedded)
- mammal (embedded)
- metamorphosis (embedded)
- molt (embedded)
- predator (embedded)

**Note:** The daily tasks build over the course of the unit to support students in developing the knowledge, vocabulary, and skills they will need in order to complete the end-of-unit task. Expectations for students' performance on the daily tasks are aligned with the disciplinary standards and the grade-level literacy standards for writing and speaking & listening.

## DAILY TASK

We have learned about the basic life cycle common to all species. We have also learned about how the mammal life cycle has some unique characteristics. Write a paragraph explaining what a life cycle is and why is it important for animal survival. Be sure to explain how mammal parents take care of their young during birth and growth (behaviors) so their young can survive (function).

Your paragraph should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

**Note:** Tasks throughout the unit are considered to be independent and autonomous writing opportunities where students express their learning through their own writing. Teachers are encouraged to integrate strategies, such as modeled, shared, and interactive writing, in order to equip students with the skills and strategies needed to complete the tasks. The use of these other writing strategies should not demonstrate a carbon copy of the task before students complete it. It is important for students to capture their own thinking as they complete each task.

## POSSIBLE STUDENT RESPONSE

All living things go through a life cycle. In all life cycles, there are stages in which living things are born, change as they grow, and become adults. Once they are adults, they start this cycle all over again. Mammals have a life cycle, too. Baby mammals are born alive (structure). Mother mammals take care of their young by feeding them milk from their body (structure). Mammal parents teach their young which foods to eat, how to find water, and how to hunt (behavior). Without this care, baby mammals might not survive (function).

TN Department of Education

**RESOURCE**

**Sample Anchor Chart:** Teachers may wish to create an anchor chart summarizing information learned throughout the unit.

| Living Things | Birth | Growth | Reproduction | Dangers/Predators | Protections |
|---|---|---|---|---|---|
| All living things (plant & animal species) | egg or seed | grow inside egg or seed | produce offspring | continuing the life cycle | depends on the species |
| Mammals | live birth | milk from mother until old enough to eat solid foods | grows inside mother's body | other animals | parent teaches survival skills |
| Bats (mammal) | live birth | milk from mother until old enough to eat on its own | grows inside its mother's body | people, pollution, and pesticides | echolocation to find food; hibernation during the winter |
| Newt (amphibian) | hatches from an egg laid underwater | begins life with gills to breathe underwater; gills go away as lungs, legs, and a tail develop | lays eggs in water | competing for food with adult newts | lives underwater and eats different food from the adult newt; adult newt lives on land |
| Butterfly (insect) | hatches from an egg laid on a leaf | caterpillar eats leaves until big enough to spin a cocoon; Inside cocoon, the caterpillar undergoes changes (metamorphosis) that result in it emerging a butterfly | mates and lays egg on a leaf | other insects and birds | caterpillar environment safer and it eats leafs rather than nectar |
| Praying Mantis (insect) | hatches from an egg sac | eats aphids, its brothers and sisters, and other insects. | grows eggs and forms an egg sac for 150+ eggs | birds, spiders, bats, and dogs | egg sac has foam that hardens to keep eggs safe; looks like a stick to fool predators; razor blades on the inside of her front arms to hold prey |
| Sea Turtle (reptile) | hatches from an egg laid on a beach | heads toward the ocean; takes years to grow into adulthood | mates and lays eggs on the beach where it was born | sharks, fish, whales, humans, birds | camouflage such as tummy and Sargassum weed; swimming speed; instinct |

**Note:** You will not see one specific skill indicated as the focus for the reading. Educators are encouraged to support students in arriving at the objectives for the reading by integrating multiple literacy standards. To that end, the question sequences integrate multiple literacy standards. The literacy standards will come into play as students access the rich texts included in the Unit Starter. In this way, multiple literacy standards naturally support students in accessing and making meaning of the text.

| PAGE/ PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| *Before Reading* | *Teacher's Note: This book is dense in information and therefore should be spread out over multiple sittings to allow students to fully understand content.*<br><br>Surface student understanding of the broad scope of the concept "living things." What are some things you know about living versus non-living things?<br><br>  (This is an opportunity for a collaborative talk structure.)<br><br>*Teacher's Note: Create the headings of an anchor chart or semantic web to record categories all living things share (birth, growth, reproduction, dangers/predators, and how they protect themselves).*<br><br>*Remind students that, in this unit, we will be learning about specific characteristics (structures and behaviors) of certain living things that enable them to survive (function).* | Things that are alive grow and change. They also can die. They need to do certain things to stay alive and like to be protected.<br><br>*(See sample anchor chart entries.)* |
| *Cover* | Looking at the pictures on the cover of this book, what do all of these things (a bird, a child, a ladybug and a caterpillar) have in common?<br><br>  <br><br>What does the title tell us about what we will find out in this non-fiction book about living things? | They are all things that are alive.<br><br>The title says, "Life Cycles." Life means something is alive and growing and changing. A cycle is something that keeps repeating. So, a life cycle might be about how plants and animals change and grow in their life span, then how those behaviors get repeated by new plants and animals so that the species does not die out. |

| | | |
|---|---|---|
| Pages 4-5 | The author gave us a lot of information about life cycles on these pages. What is a life cycle?<br><br>What are some things the author told us were important about life cycles?<br><br>Why are life cycles so important?<br><br>What would happen if one of the stages of a life cycle was interrupted?<br><br>*Teacher's Note: Add information for "All Living Things" to the anchor chart.* | A life cycle is all the stages a living thing goes through between the time it is born and the time it becomes an adult.<br><br>Every living thing has a life cycle. All life cycles go through stages. All living things grow and change throughout their lives.<br><br>Without a continuing life cycle, animals would not be able to continue to survive.<br><br>If an organism could not continue their life cycle, it would die. |
| During Reading | *Teacher's Note: Continue to pause and discuss in order to "fill in" parts of the anchor chart for students to refer to later*. | |
| Pages 22-23 | *Teacher's Note: Remind students that all living things have life cycles, but there are differences in some life cycles in the way birth, growth, and adulthood happens.*<br><br>We are now going to learn about another group of living things called mammals and find out what the life cycle looks like for mammals.<br><br>How do both the text and illustrations help us understand the difference between the life cycles of mammals and other animals? | The text and illustrations show us how baby mammals are born alive from their mother's body and how mammals nurse their young to keep them alive, which is different from other animals. |

| | | |
|---|---|---|
| Pages 24-25 | *Teacher's Note: Make sure to read the captions as well as the text.*<br><br>How does the caption on page 25 help us understand what is going on in the picture? *(Explain what a caption is if necessary.)*<br><br>In what ways do mammals ensure their offspring's survival? | The caption tells us that the mother is licking her baby to put her smell on the baby. This helps the other adults know that this is her baby.<br><br>Mammals make sure their offspring survive by giving birth to only a few young at once. Having fewer babies to take care of allows the mother time to teach their young which food to eat, how to find water, how to catch prey, and how to avoid dangers. |

## *BATS* - READING 1, QUESTION SEQUENCE 1, DAILY TASK 2

| TEXT |
|---|
| **Text:** *Bats*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Shared Reading |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| AD630L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure for this text is moderately complex. The illustrations contain details and labels which support understanding but are themselves moderately complex. The illustrations are important for understanding the text. | The language features are moderately complex. The language is largely explicit and easy to understand with some opportunity for more in-depth meaning discussion. The vocabulary should be familiar to most readers but does include some academic language, such as membrane, roosts, migrate, and hibernate. Sentence structures include both simple and complex sentences. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of this text is slightly complex. The meaning is clear and narrowly focused. The text purpose is to explain and describe the characteristics and behaviors of many types of bats. | The knowledge demands for this text are moderately complex. Most of what a reader would need to know is provided by the text, making it useful for building background related to bats. The text relies on both common knowledge and discipline-specific knowledge. The text, for example, refers to concepts such as hibernation and echolocation. |

## LESSON OBJECTIVE(S) FOR THIS READING

Students will understand how the behaviors and characteristics of a bat helps it survive in each stage of its life cycle.

In today's reading, students will:

- cite evidence to support their developing thinking about how bats survive at each stage of their life cycle;
- read and make meaning of the text, *Bats*;
- participate with peers and adults in collaborative conversations in small or large groups about life cycles;
- recall information from experiences or gather information from provided sources to answer a question; and
- recount or describe key ideas or details from a text read aloud or information presented orally.

## VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- roosts (explicit)
- migrate (embedded)
- echolocation (embedded)
- hibernating (explicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- mammals

## DAILY TASK

Draw the life cycle of a bat including labels for each stage in the cycle. Write an informative paragraph describing how a bat's characteristics (behaviors and structures) help it survive (function) each stage of its cycle.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

*Teacher's Note: Students' illustrations of the bat's life cycle should include the following stages: birth, young pup in roost, young bat, and adult.*

| POSSIBLE STUDENT RESPONSE |
|---|
| Throughout a bat's life, it uses many of its characteristics and behaviors to survive. When a bat is born, it is taken care of by its mother and survives by drinking its mother's milk. It stays in a nursery, or roost, until it is about three months old. A mother bat will carry its young pup while she hunts, until the pup becomes too heavy for her to carry. At three months old, the young pup is ready to fly on nightly hunting trips. The young pup uses echolocation to locate its food while hunting. During winter months, a bat will hibernate, or migrate to a warmer place to survive. When a bat is one year old, it is considered an adult. Bats are amazing creatures that have many characteristics and behaviors that help them survive each stage of their life! |

| PAGE/ PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note: Remind students that we have been reading about mammal and insect life cycles up to this point, and now we are going to read about bats (a mammal). If using an anchor chart or semantic web to record the similarities and differences in life cycles, review them now.* | |
| Page 4 | How are bats different from other mammals?<br><br>How are they the same as other mammals?<br><br>(This is an opportunity for a collaborative talk structure.)<br><br>*Teacher's Note: Students discuss the similarities and differences between bats and other mammals they have studied so far with partners or small groups. Teachers should listen in on student conversations and hear vocabulary words like bats can fly, born alive, warm-blooded, nocturnal, mammal, etc.* | Bats are different from other mammals because they are the only mammals that can fly.<br><br>Bats are the same as other mammals because their babies are born alive instead of being hatched from eggs, and they are warm-blooded. |

| | | |
|---|---|---|
| Page10 | What is a roost, and how does it help a bat?<br><br>What are some examples of roosts the author gives us?<br><br>How does hibernation help a bat survive? | A roost is a dark, small area a bat uses to hibernate in during the winter.<br><br>The author tells us that caves, attics, barns, or tall trees can be used as roosts for bats.<br><br>It is important for a bat to hibernate so it can survive the long, cold winter and continue in its life cycle. |
| Page 11 | How does a bat's physical characteristics help it survive during hibernation?<br><br>What does it mean when the author says, "Just before hibernating begins, bats eat lots of food to live on during the long winter months their heartbeats slow down, and their body temperatures drop?"<br><br>*Teacher's Note: As students discuss, teachers should listen in on student conversations and hear ideas that reflect an understanding that when something is hibernating it is sleeping for a long period of time. Also that the author is helping readers understand that the bat is about to go to sleep for a long time so it is storing up food in its stomach and going into a resting mode so everything slows down. Teachers may also hear connections like coming in from being active at recess or P.E. then sitting down. The heart rate slows down to rest.*<br><br>Why do you think a slow heartbeat helps a bat hibernate? | A bat's heartbeat will slow down, and its body temperature will drop during hibernation.<br><br>A slow heartbeat makes it possible for a bat to go into hibernation. A regular heartbeat keeps the bat active. A slower heartbeat helps the bat stay in hibernation |

| | | |
|---|---|---|
| Pages 14-15 | Why is echolocation important for a bat's survival?<br><br>How does the illustration help us understand how a bat uses echolocation to "see" while it is hunting? | Echolocation is important for a bat's survival because it helps a bat find food to live.<br><br>The illustration helps us see that when a bat is hunting, it sends out a high-pitched beeping sound. The sound waves will bounce off an insect and echo back to the bat's ears. The echo will tell the bat the size and shape of the insect and where it is located. |
| Pages 22-24 | Describe how a mother bat prepares for having a baby.<br><br>How does the mother bat take care of her young pup?<br><br>How is the life cycle of a bat similar to other mammals?<br><br>  <br><br>*Teacher's Note: Add bat information to the anchor chart.* | During birth, a mother bat will hang by her thumb claws and form a basket with her tail membrane. When the pup is born, it will slide into the basket.<br><br>A mother bat takes care of her young pup by hanging upside down, cradling the pup under her wing, and feeding it milk.<br><br>The life cycle of a bat is similar to other mammals in many ways. When a bat is young, it is nursed by its mother. Also, a bat only gives birth to one pup so that it can take care of it and ensure its survival. |

## *NIGHTSONG* - READING 1, QUESTION SEQUENCE 1, DAILY TASK 3

| TEXT |
|---|
| **Text:** *Nightsong*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Interactive Read Aloud |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| AD790L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| This text structure is slightly complex. The story has one main character, takes place during one evening, and is chronological in event sequence. The illustrations directly support and assist in interpreting the text. | This text is very complex. It contains figurative language such as "...the shadows clinging to the walls of the cave began to wake and whisper..." The text contains some unfamiliar vocabulary such as sense, peer, errands, and blanketing. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| This text is slightly complex. The story plot is simple and easy to follow. There is one level of meaning throughout the text. The story is about a young bat who goes out one evening to hunt for food. Opportunity for inferring is high (i.e., echolocation is subtly hinted about through the phrase "good sense"). The opportunity for making connections to previous learning or previous nonfiction text is also high. | The text is moderately complex. The reader must infer that the phrase "good sense" means echolocation. Surfacing some prior knowledge of bat behaviors would be beneficial before reading this text. |

## LESSON OBJECTIVE(S) FOR THIS READING

The lesson objectives for this reading of *Nightsong* focus on students seeing how the author of this nonfiction text helps the reader understand actual structures and behaviors of bats, such as echolocation.

In today's reading, students will:

- cite evidence to support their understanding of how the author uses a story to help the reader understand echolocation;
- consider how figurative phrases help the reader use their senses to understand a concept, such as echolocation;
- describe how Chiro in *Nightsong* responds to major events and challenges;
- recall information from experiences or gather information from provided *Nightsong* and other related texts to answer a question; and
- recount or describe key ideas or details from *Nightsong* as well as related information presented orally.

## VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- chanted (explicit)
- margins (embedded)
- strand (embedded)
- kin (embedded)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- echolocation

## DAILY TASK

Use the information from the previous nonfiction expository text, *Bats*, and details from this fiction text to write an explanatory paragraph about how the author of *Nightsong* helps us understand echolocation and how echolocation helps Chiro during his long journey to find food and his way home.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

| POSSIBLE STUDENT RESPONSE |
|---|
| The author of *Nightsong* uses a story to help readers understand the idea of echolocation. In *Nightsong*, a young bat named Chiro embarks on a challenging journey. Chiro remembered to use his good sense, echolocation, to help him see and find food during the dark night. Chiro begins to sing and his song echoes back to him which helps him find the pond where the juicy insects live. At the end of the story, Chiro uses echolocation to help him find his way back home. Every time Chiro uses his song, the water, trees, and cliffs sing back to him, and it helps him find his way back to his cave. The author helped readers understand echolocation through this story. |

| PAGE/ PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note:* Nightsong, *by Ari Berk, is a fiction text and was selected to be used for instruction of story structure, but it can also be used to extend students' understanding of the unit's enduring understanding of animals having external* ***structures and behaviors*** *with specific* ***functions*** *that work together to support survival during the life cycle.*<br><br>*Take a few minutes before reading this text to review the differences between fiction and nonfiction texts. Remind students to listen the important elements of fiction text (e.g., setting, characters, plot, etc.) during the first reading. Then, after the students have an understanding of the story you will move toward expanding the understanding of animal structures, behaviors and functions.*<br><br>*Read the text all the way through with minimal interruptions. Then, go back and ask the question sequence*. | |
| Pages 1-6 | In the beginning of the story, the author has revealed to us several things: setting, characters, and a major event that is going to happen. Identify each of these important pieces of information.<br><br>  (This is an opportunity for a collaborative talk structure.)<br><br>The author says, "The shadows clinging to the walls of the cave began to wake and | The setting is evening when it is getting dark outside. The characters are Chiro, a young bat, and his mother. Chiro's mother is sending him off on his own for the first time to get his breakfast. He is a little scared because it is dark, but she reassures him of bats' special abilities that can help him find his way in the dark. |

| | | |
|---|---|---|
| | whisper…" What is the author trying to tell us?<br><br>*Teacher's Note: Revisit* Bats*, page 26, if needed.*<br><br>Based on our text, *Bats*, what stage is Chiro in on his life cycle, and about how old is he? | The author is trying to tell us the sun has set and there is life in the dark cave.<br><br>In our text, *Bats*, we learned that at three months old, a pup will begin nightly hunting trips, so Chiro must be a pup who is at least three months old. |
| Pages 3-4 | What does Chiro's mother mean by "make your way in the world?"<br><br>*Teacher's Note: Reread sections of* Bats *if needed.* | It means that Chiro is now old enough go out into the world by himself. |
| Pages 5-6 | The author describes Chiro as having "good sense." How does the text help us understand what "good sense" means?<br><br>What do you suppose the author is telling you about what might be an *animal structure or behavior* that is important to bats, and what is the *function* of that behavior? | On page 5 it describes it as the song you sing out into the world, and the song the world sings back to you. This helps us understand it is a sound that he is making that echoes back to him to help him know what is in front of him.<br><br>Based on the text, *Bats,* Chiro's sense could be the behavior, echolocation. The function is survival to find food and to navigate in the dark since it is a nocturnal animal. |
| Pages10-11 | How does the illustration on page 10 help us know how Chiro is using his good sense or echolocation? How might this behavior help him survive?<br><br>On page 10, the author says, "…long arms rose up in front of him, waving slowly, blocking his path."<br><br>How do you know? | The illustrations are dark, and we can barely see shadows that look like trees. This helps us understand how hard it was to see things in the dark. Then, there is a little bit of blue color coming from his mouth that shows the sound he is making is helping him "see" in the dark.<br><br>The long arms are branches and trees that are in front of Chiro.<br><br>The illustrations are dark, and we can barely see shadows that look like trees. |

| | | |
|---|---|---|
| Pages 12-18 | As the story continues, what new important pieces of information have you learned in the middle of the story?<br>*(Revisit* Bats*, pages 14-15. Show the illustrations from both texts)*<br>  <br>How do the illustrations on pages 12-18 from *Bats* and the illustrations in *Nightsong* help us understand how Chiro uses echolocation to help him find his way? | Chiro is exploring his environment using his "good sense." He is discovering trees, other flying animals, and telephone wires.<br><br>In the nonfiction text, the illustrations show how the sound that a bat makes echoes off of trees and other objects back to the bat, so it feels as if it can "see." In the fiction text, the dark part of the illustration is turning into color as if he can now "see" what is in front of him – almost like a flashlight. Being able to "see" things helps him know where to go and how to avoid dangers like the telephone wires. |
| Pages 19-20 | *(Revisit* Bats*, pgs.15-16, if needed)*<br>Based on what we learned from our text, *Bats*, explain how Chiro's echolocation helps him hunt for food. | Chiro used echolocation to hunt for food. He made a high-pitched noise which bounced off the insects and bounced back to Chiro's ears. This told Chiro the size, shape, and location of the insects. |
| Pages 21-30 | As the story concludes, what new important pieces of information have you learned in the end of the story?<br>  <br>What message or theme was the author trying to share? How do you know? | The setting is dawn. Chiro, the main character, is about to set off to find food for the first time on his own. He is unsure and afraid of the dark. In the end, Chiro finds his way back to his cave and his mother using his good sense. Chiro told his mother it was very dark but he could "see" everything just like she said he would.<br><br>The message or theme the author is teaching is that Chiro could learn to use the abilities he had to overcome his fear of the dark. He was growing up. |

| | | |
|---|---|---|
| Pages 31-32 | What do you think is happening when the author says, "his cave called out from the blanketing shrubs and pillows of moss?" | The author is trying to show us that when Chiro uses echolocation, it is like he can hear the cave calling out to him. |
| | How does the author show us that Chiro understands echolocation now? | Chiro tells his mother that it was very, very dark, and he was able to see everything. He couldn't really see; he was hearing echoes. |
| | What animal *structures* and *functions* did the author present in the story? | The little bat learned to use his natural behaviors and structure to survive in the darkness finding food, avoiding dangers, and finding his way back home. |
| | Are these *structures* and *functions* described accurately? | Yes, except that the nonfiction book does not say that baby bats are afraid of the dark. |

**RESOURCE**

As the texts *Nightsong* and *Bats* are explored, a chart, such as the following, could be co-created during the lesson.

| Fiction behavior/structure | Non-fiction behavior/structure | Accurate |
|---|---|---|
| Good sense/"seeing" in the dark | Echolocation/navigating in darkness | yes |
| Afraid to go out in the dark | Nocturnal instincts | no |
| Eating flying insect at the pond | Eating mosquitos | yes |
| One baby and one mother | Mother bats have one offspring | yes |

## *PINDULI* – READING 1, QUESTION SEQUENCE 1, DAILY TASK 4

| TEXT |
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| **Text:** *Pinduli*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Shared Reading |

| TEXT COMPLEXITY ANALYSIS | |
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| **QUANTITATIVE COMPLEXITY MEASURES** | |
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| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| This text is moderately complex. The text is chronological; however, the introduction of a ghost or evil spirit creates a new dimension to the storyline which may be difficult to predict. The vivid illustrations support and assist in interpreting text. | The language features are moderately complex. The text is mostly explicit with some occasions for more complex meaning (e.g., the introduction of a ghost or evil spirit). Vocabulary is mostly contemporary. Sentences are a combination of simple, compound, and some complex sentences. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The meaning of this text is moderately complex. This text explores a single theme about being slightly different and being teased because of it; however, it is conveyed with some subtlety. | The knowledge demands for this text are slightly complex. This text explores a single theme that is easily identified by a reader of this age. Any knowledge a reader might need is included in the text. |

## LESSON OBJECTIVE(S) FOR THIS READING

Students will learn what hyenas' structures (nose, ears, mane) are important and how these structures function to help them to survive.

In today's reading, students will:

- cite evidence to support their developing thinking about this fiction text about a story structure and hyenas' structures (nose, ears, mane) are important and how these structures function to help them to survive;
- describe how words and phrases supply meaning in a story to a hyena's structures and functions for survival;
- read and make meaning of the story structure of a narrative read aloud text about a hyenas' structures and functions for survival as well as how the main character responds to challenges from other characters;
- explain and describe how the main character responds to challenges from other characters;
- recount or describe key details about a hyenas' structures and functions for survival and how the main character responds to challenges from other characters; and
- participate in collaborative conversations with varied peers about a hyenas' structures and functions for survival and how the main character responds to challenges from other characters.

## VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- prickly (explicit)
- mane (explicit)
- ravenous (embedded)

## DAILY TASK

In the story *Pinduli*, the main character, chose to change her appearance by rolling in pale dust until she was completely white, because the lion and zebra made fun of her fur.

Take a stance as to whether you agree or disagree with the character's behavior. Write your opinion about whether Pinduli should have changed the appearance of one of her structures (mane). Why or why not?

Use specific examples from the text to support your opinion. Include your thinking about how animal structures function to support survival.

Your writing should:

- introduce your opinion;
- develop the opinions with facts, definitions, and details;
- use linking words and phrases to connect ideas;

- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

| POSSIBLE STUDENT RESPONSE |
|---|
| I think that Pinduli should not have changed her mane from striped to all white. The reason that hyenas have a striped mane is so that they can blend in with the environment or use it to camouflage themselves in the desert. If she changes her appearance, or the structure of her mane, then she will no longer blend in with the environment, and it will be easy for predators to see her in the African desert. When a structure is changed on an animal, it will affect their ability to survive. Another example in the book was when Pinduli put her ears down. When she changed her structure, her ears, she couldn't hear very well. That will affect her ability to hear predators around her. Animals are born with certain structures that help them survive in their environments, so they should not change them. |

| PAGE/ PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before reading | *Teacher's Note:* Pinduli*, by Janell Cannon, is a fiction text and was selected to be used for instruction of story structure, but it can also be used to extend students' understanding of the unit's enduring understanding of animals having external* ***structures*** *with specific* ***functions*** *that work together to support survival during the life cycle.*<br><br>*Take a few minutes before reading this text to review the differences between fiction and nonfiction texts. Remind students to listen the important elements of fiction text (e.g., setting, characters, plot, etc.) during the first reading. Then, after the students have an understanding of the story, move toward expanding the understanding of animal structures and functions. Remind students that since this is a fiction text, we aren't always sure if the information is factual. We will need to compare it to an informational text on hyenas to see if it is correct.* | |
| Pages 7-8 | In the beginning of the story, the author has revealed to us several things: setting, | The setting of the story is in east Africa at dusk or the beginning of night. The |

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| | characters, and some major events. Identify each of these important pieces of information.<br>  (This is an opportunity for a collaborative talk structure.) | characters in the story so far are Pinduli, Mama Hyena, and a dog pack. In the beginning of the story, Pinduli uses her keen sense of smell to know that dogs were in the area. When the dog pack made fun of the size of Pinduli's ears, she tried to make her ears stay down. |
| | The author describes Pinduli as having "sharp ears." How does the text help us understand what "sharp ears" means? | The text tells us, "Pinduli's sharp ears picked up the soft pounding of pads on the dirt." Sharp ears must mean Pinduli has very good hearing, since she is able to hear soft footsteps. |
| | What do you suppose the author is telling you about what might be an *animal structure* that is important to hyenas, and what is the *function* of it? | The author is telling us that a hyena's sense of smell and hearing are very good. Pinduli could smell and hear the dog pack from a long distance away. This would help them to know what predators might be close by. |
| Pages 13-14 | As the story continues, what new important pieces of information have you learned in the beginning of the story? | The setting of the story is in east Africa at dusk or the beginning of night. The characters in the story are Pinduli, lion, and zebra. Continuing on in the beginning of the story, Lion saw Pinduli, so she poofed her mane to looked twice her size. Lion made fun of the mane and called it a "prickly fringe," so she went and jumped in the water to fix it. Zebra made fun of her mane while she was in the watering hole. |
| | How do the illustrations on pages 9-10 help us know how Pindul's body reacted when she saw lion? How might this behavior help her survive? | The illustrations show us that when Pinduli saw the lion, her mane poofed up and she looked twice her size. This behavior may keep her safe from predators because it makes her look more intimidating. |
| | How does Pinduli respond to the animals making fun of her physical characteristics?<br><br>How might this impact her ability to hunt and survive? | When Dog makes fun of her big ears, she lets them fall flat against her head. When Lion makes fun of her straggly coat, she soaks her coat in the water hole.<br>If Pinduli puts her ears down, she won't be able to hear prey or predators. If she soaks |

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| | | her mane, she won't be able to scare away predators. |
| Pages 23-24 | As the story continues, what new important pieces of information have you learned in the middle of the story?<br><br>On pages 15-16 in the text, the author writes about what Pinduli did to get rid of her striped fur. What did she do? Do you think it was a good idea? Why or why not?<br><br>  | The setting of the story is in east Africa at dusk or the beginning of night. The characters in the story are Pinduli, dogs, lions, zebras, and other animals in Africa. In the middle of the story, Pinduli rolls in pale dust to hide her stripes and heads home. Pinduli runs into the same animals that had made fun of her.<br><br>Pinduli was upset about lion and zebra making fun of her mane. She decides to roll around in pale dust to hide the striped mane. I don't think this would be a good idea because she would get rid of her striped mane, which helps her blend in with the environment and scare off predators. |
| Pages 29-30 | Why did the animals say they made fun of Pinduli?<br><br>What message do you think the author is trying to send us through the behavior of the animals that could apply to our own behavior? | The animals said that they made fun of Pinduli because other animals made fun of them first. (For example, Zebra said that Owl called her stripes "garish stripes.") So, she then made fun of Pinduli's stripes.<br><br>The message the author is teaching is that words have the power to hurt or heal. Also, if someone says unkind words to another, the effect might be that the one who is hurt might hurt someone else. |
| Pages 31-32 | As the story continues, what new important pieces of information have you learned in the middle of the story? What is the climax of the story?<br><br>*Teacher's Note: If students haven't learned about the climax of a narrative text yet, take the opportunity to talk about this as the point in the story where the conflict reaches its highest point.* | The setting of the story is in east Africa at dusk or the beginning of night. The characters in the story are Pinduli, dogs, lions, zebras, and other animals in Africa. In the next part of the story, the animals thought Pinduli was a ghost and asked to be spared from the ghost's wrath. Pinduli remembered that spirits always give tasks and want offerings. The climax of the story is when Pinduli said, "In order to appease bad spirits, you must find your tormentors and make peace," as well as, "And always leave a bit of every meal as an offering." If |

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| | How did Pinduli use her appearance to her advantage at this point in the story?<br><br>What is Pinduli's goal?<br><br>  <br>*Teacher's Note: At this point in the text, students will be making predictions and inferences. They should start to realize that Pinduli wants the animals to apologize for being mean to her and each other and to ease the burden of always searching for food.* | the animals did this, then the ghost or spirit would leave.<br><br>Pinduli realized that the animals did not recognize her as the hyena but thought she was a ghost. So, she decides to pretend to be a ghost and use her knowledge about spirits. In the text, the author writes, "Of course! Spirits always give tasks and want offerings!"<br><br>Pinduli wants the animals to apologize for being mean to her and each other and to ease the burden of always searching for food. |
| Pages 39-40 | As the story concludes, what new important pieces of information have you learned in the end of the story?<br><br>What message was the author trying to share? How do you know? | The setting of the story is in east Africa at dusk or the beginning of night. The characters in the story are Pinduli, mama dogs, lions, zebras, and other animals in Africa. The ending of the story is when Pinduli returns home to Mama Hyena. The animals seek out the other animals that were rude to them and talk things out. Pinduli and her Mama find delicious treats everywhere and no longer have to spend hours hungrily scrounging for food.<br><br>The message the author is teaching is that words have the power to hurt or heal. Also, if someone says unkind words to another, the effect might be that the one who is hurt might hurt someone else.<br><br>The animals learned they should not say unkind things to each other. They also learned they should apologize and make peace with each other when there are hurt feelings. |

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| | What animal *structures* and *functions* did the author present in the story? Are these *structures* and *functions* accurate? | The striped hyena has a keen sense of smell to identify what is around it. It also has large eyes so that it can hear sounds from far away. The hyena's mane is striped so that it can blend in with the environment and it can puff it out to scare off predators. I think all these things are true about hyenas, but rolling around in pale dust doesn't make sense. That would take away their ability to be camouflaged in Africa. |

| TEXT |
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| **Text:** *Born in the Wild: Baby Mammals and Their Parents*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Interactive Read Aloud |

| TEXT COMPLEXITY ANALYSIS | |
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| **QUANTITATIVE COMPLEXITY MEASURES** | |
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| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure is moderately complex. *Born in the Wild* is organized around nine concepts that divide the 48-page book into sections. Each section clearly identifies an important mammal characteristic. Detailed illustrations and paragraph-long vignettes describing how the animals are cared for and slowly gain independence supplement a deeper comprehension of the text. | The language features are very complex. This text contains several examples of complex vocabulary that might be unfamiliar to second grade students. Some examples include: caressed, groomed, stimulation, inseparable, and reassurance. Other vocabulary is also subject specific and relates specifically to animals. Some examples include: regurgitating, defenseless, mob, marsupial, and prowl. The descriptive vignettes contain complex sentences. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of the text is slightly complex. The focus of this text is explicitly stated, and the traits that all baby mammals share are explored in a concrete way. The author clearly states that, even though these mammals are born in the wild, they're not so very different from us. | The knowledge demands for this text are moderately complex. Students will begin to build understanding about mammal needs by drawing on background knowledge of the more familiar animals in the text. However, students will most likely be unfamiliar with some of the more exotic animals included in the text. Although many of the details about parental care will be unfamiliar to students, they will make connections to their own lives, pets, and animals near them. |

## LESSON OBJECTIVE(S) FOR THIS READING

The students will learn that there are common needs most mammals share in order to progress through their life cycle; additionally, mammal parents and babies have specific behaviors which support growth and survival.

In today's reading, students will:

- determine the main idea of the text;
- recount the key details and explain how they support the main ideas of the needs of baby mammals and how their parents support growth and survival;
- make meaning from words and phrases from a text on how parent mammals support growth and survival of baby mammals;
- read and make meaning of *Born in the Wild* as it is read aloud;
- write an informational text about connections between the number of offspring mammals have, the level of care, and survival tendencies of the species;
- recount or describe key details from *Born in the Wild*; and
- participate in collaborative conversations with varied peers about the text.

## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- regurgitate (embedded)
- predators (embedded)
- stimulation (embedded)
- inseparable (embedded)
- nurturing (embedded)
- reassurance (embedded)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- mammals

## DAILY TASK

Write an informational text explaining how mammals' behaviors help their offspring survive. Make connections between the number of offspring mammals have, the level of care from the parent, and the survival tendencies of the species.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

| POSSIBLE STUENT RESPONSE |
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| Animals must be able to survive on their own. Mammal parents provide extra care and teaching for their babies so that they can survive. First, a baby mammal nurses or drinks its mother's milk until it's ready to eat real food. A grizzly bear cub might drink milk for two or three years. A baby mammal also gets protection from its family. A whole musk ox herd will make a circle around a little calf to keep it safe from being attacked. Playing also helps baby mammals learn important skills they need when they become adults. For example, baby lemurs practice hopping so they will be able to leap through the trees later. Lastly, they are taught how to find food. A sea otter pup watches his mother swim and dive to find clams and urchins. Because of all this care and teaching, mammals don't have so many young at once in order for their species to continue. In conclusion, mammals have behaviors and teach them to their offspring to help them survive in the wild. |

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
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| Before Reading | The mammals that we know the most about are humans. What is the life cycle of a human? What do babies need from their parents as they move through the life cycle (e.g., food, shelter, protection, play, teaching, etc.)? Chart the categories and responses so that students can compare humans to animals.<br><br>Baby animals in the wild need some of the same things from their parents; however, they may or may not be different in the way that they teach their babies. This book will help you to learn about how animals take care of their babies. | Babies grow inside a mother's belly. Once born, the babies drink milk until they can eat solid food. Babies eat food that help them grow and develop into children and then adults. Most humans have some sort of building (house apartment, hut, etc.) they use for shelter from the weather. Adults teach babies about how to stay safe (e.g., don't touch a hot stove, don't play in the street, etc.) They also teach children how to dress and feed themselves. |
| | *Teacher's Note: Read the text through in its entirety the first time.*<br><br>Using evidence from the text, what do most mammal babies need?<br><br>(This is an opportunity for a collaborative talk structure.)<br><br>*Teacher's Note: If students have difficulty recalling needed information, you may choose to refer back to What Is a Life Cycle? Pages 22-25, or the animal anchor chart as needed.)* | Baby mammals need their mother's milk and protection. They also need shelter and a family who takes care of them. Like us, baby mammals need to play and learn. |

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| Page 4 (polar bear, giraffe)<br><br>Main idea – how the life cycle starts | This text is an informational text. What do we know about how informational text is organized?<br><br><u>*During the second reading of the text:*</u><br><br>Read pages 1-4.<br><br>Is this informational text the same or different from what you explained before reading? Does it have a table of contents and a glossary? What about the main ideas and key details? | Most informational texts have a table of contents to help find the information. When reading we should be thinking about the main ideas that the text is teaching us. Then, we should listen for the key details about the main idea. Finally, if we don't understand a word, then there is usually a glossary that we can use to learn about words we don't know.<br><br>This informational text is different because there isn't a table of contents or glossary. On page 2 it says, "*A baby is born*." So, this must be the main idea about how the life cycle of the animals starts. Then, when you read the next two pages, it gave us the details about how baby polar bears and giraffes are born. |
| Page 8 (grizzly bear, wolf, and guanaco)<br><br>Main idea - food | Read pages 5-8.<br><br>On page 5, the text says, "The baby is hungry." What will you learn about in this section of the text? What is the main idea?<br><br>How do wolf parents help their pups eat, and why is this necessary?<br><br>What might happen to the baby wolves if the mother didn't do this? | The main idea of this section is how baby mammals get food (i.e., nurse or drink from their mother to get milk, eat meat that is regurgitated from the mother, and eat grasses and plants).<br><br>The adult wolves chew up the meat and regurgitate (means to bring it back from the stomach and out their mouth to the mouth of the baby.) They have to do this because the meat is too tough for the wolf pups' tiny teeth.<br><br>The wolf pups would not get enough food to keep them healthy and growing. |
| Page 12 (deer, panda, and musk ox)<br><br>Main idea - protection | What is the main idea of this section of the text?<br><br>How do different animals depend on their parents to keep them from danger? Explain your answer using a specific example from our text. | The main idea of this section is how adult mammals protect their babies from danger.<br><br>The mother deer hides her fawn and teaches it to be perfectly still. She stays away most of the time to keep the predators away from the hiding place. A mother panda holds her baby for several days without even putting him down to eat or drink. A musk ox family will make a circle around a new calf to protect it from being |

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| | | attacked. |
| | Why is it important that predators stay away from the fawn's hiding place? | The fawn is defenseless and would have no way to protect itself from a hungry predator. |
| | What would happen to the baby panda if the mother put it down? | The baby panda isn't even strong enough to support its own weight. It wouldn't be able to survive. |
| | What might happen to the calf if the herd didn't behave in this way?  | The musk ox calf is also defenseless against hungry wolves. The wolves would easily attack and kill the calf. |
| Page 16 (mice, badger, raccoon)<br>Main idea - shelter | What is the main idea of this section of the text? | The main idea of this section of the book is where mammals live to protect babies from danger. |
| | According to the text, where are some places that mammals live? | Western harvest mice live in nests made of grass and plants, a badger lives in a burrow underground, and a raccoon lives in a hollow tree. |
| | Can you think of other shelters that mammals use to protect themselves? | Humans live in houses. Bats live in caves. Whales live in the ocean. Bears live in caves. |
| Page 20 (kangaroo, opossum, plains zebra)<br>Main idea – How baby mammals move | According to the text, what are some ways babies stay safe with their mothers? | A joey stays safe in its mother's special pouch. Opossums cling to their mothers' backs as they roam. Zebra colts can leap and run with their mothers within hours of their birth! |
| | Why is it important for babies to stay with their mothers? | A newborn will be safer with its mother. All alone, the baby would be easily attacked by a predator. |
| | What connections can you make between the mammal parents on pages 19-20 to the bat mother we learned about in the Gail Gibbons text *(hold up pages 24-25 from* Bats*, by Gail Gibbons)*? | The kangaroo and opossum mothers carry their young when their young are newly born. The baby bat clings to its mother when it is newly born. |

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| Page 24 (hippopotamus, red fox, meerkat)<br><br>Main idea – mammal families, caring for babies, and names of babies | What is the main idea of this section of the text?<br><br>How do animals work together to care for their young?<br><br>What might happen if these animals cared for their young on their own? | The main idea of this section is mammal families, how they care for the babies, and the names of the babies (calf, kits, pups).<br><br>Some animals work in a team to care for the young of the group. All members of the family have a part in their care. A meerkat family may have two to four pups at once. The mothers will gather together with their babies to keep them safe. The job of a father fox is to bring back food to the den and help protect them. A meerkat mob includes parents, older siblings, cousins, aunts, and uncles, who all work together to protect and teach the new pups.<br><br>The animals might be in more danger because they wouldn't have the protection of many adults. They wouldn't get as much stimulation and attention. They wouldn't learn as much about being a part of a community. |
| Page 28 (cougar, chimpanzee, elephant)<br><br>Main idea – taking care of babies | What is the main idea of this section of the text?<br><br>According to the text, what are some key details that the author shares about how cougars, chimpanzees, and elephants care for their babies? | The main idea of this section is how adults care for their babies.<br><br>Cougars groom or clean their young by licking them and sleeps with them to keep them warm. Chimpanzees stay together all the time. The mother develops a strong bond with the baby by touching, holding hands, and playing with them. An elephant touches the baby elephant's trunk and stays close by. |
| Page 32 (lemur, lion, mountain goat)<br><br>Main idea – play helps learning survival skills | What is the main idea of this section of the text?<br><br>How does "play" help young animals survive? What are some examples from the text? | The main idea of this section is how play helps the baby learn survival skills.<br><br>Play time helps the young animals practice skills they will use as adults. A young lemur practices hopping so that one day it can leap through trees. A lion cub must practice stalking, running, and attacking through games so that they can survive when they are older. Mountain goats practice pushing and shoving so that they can compete against other male goats when they become adults. |

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| Page 36 (pika, sea otter, orangutan)<br><br>Main idea – survival skills | What is the main idea of this section of the text?<br><br>According to the text, what are some things a young mammal must learn before they reach adult stage?<br><br>What might happen if they don't learn those things? How could this impact their life cycles and survival?<br><br>How does the author organize the information in the text to help us understand this information?<br><br>What connections can you make between the baby mammals in the text and human babies? | The main idea of this section is learning survival skills.<br><br>Young mammals must learn to hunt for food. They learn signals that danger is near. They may also learn to swim, crack open shells, use sticks for tools, or build a nest.<br><br>If the young mammals don't learn these important things, they will not survive to adulthood. If they don't survive, they won't be able to have babies on their own.<br><br>The author begins each section in the text with a sentence describing the main idea of the next pages. The following pages give details to support the main idea of each section.<br><br>When I was a baby, I had to be carried everywhere like the kangaroo baby. My mom and dad protected me from danger like the musk ox family circles around the baby musk ox. Like the lion babies, I loved to play games with my brothers and sisters. Like the orangutan baby, I have parents and teachers who have taught me many important skills. |

## *WHAT IS A LIFE CYCLE?* – READING 2, QUESTION SEQUENCE 2, DAILY TASK 6

### TEXT

**Text:** *What Is a Life Cycle?*

**Question Sequence:** Second Read

**Instructional Strategy:** Interactive Read Aloud

### LESSON OBJECTIVE(S) FOR THIS READING

During this reading of *What is a Life Cycle?*, students will be able to explain how metamorphosis is a part of a life cycle and how metamorphosis protects the young so they survive.

In today's reading, students will:

- cite evidence to support their developing thinking about how the newt and the butterfly life cycle are different from a mammal's life cycle;
- use both the text and the illustrations to support their thinking about how metamorphosis helps newts and butterflies to survive;
- read and make meaning of *What is a Life Cycle?;*
- participate with varied peers and adults in collaborative conversations in small or large groups about life cycles;
- recall information from experiences or gather information from provided sources to answer a question; and
- produce clear and coherent writing related to metamorphosis in which the development, organization, and style are appropriate to task, purpose, and audience.

### VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- metamorphosis (explicit)
- larva (implicit)
- chrysalis (embedded)
- compete (implicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- life cycle
- predators

| DAILY TASK |
| --- |
| You are an animal scientist for the zoo. The zoo has opened a new butterfly exhibit. A group of children from the local preschool will be visiting the butterfly exhibit tomorrow and will observe butterflies in different stages of metamorphosis. Write a short speech explaining what the preschool students will observe and why: the stages of metamorphosis and how they protect the young caterpillar.<br>• Include some of our vocabulary terms, such as metamorphosis, larvae, caterpillar, predators, chrysalis, or compete.<br>• Make sure to welcome the children, introduce yourself, and share your information about the stages of metamorphosis.<br><br>Your writing should:<br>• introduce your topic;<br>• develop the topic with facts, definitions, and details;<br>• use linking words and phrases to connect ideas;<br>• use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and<br>• provide a conclusion to provide closure for your readers. |

| POSSIBLE STUDENT RESPONSE |
| --- |
| Welcome friends! My name is Hannah. Today, we are going to learn about butterflies and their life cycle. A very special thing happens to a butterfly. It is called metamorphosis. Yes, it is a big word. Metamorphosis means to change. When a butterfly is born, it doesn't look like its parents at all. It doesn't have beautiful wings or fly around like we see here. Instead, when it hatches from its egg it is a little caterpillar that crawls around and eats plants. This is called the larvae stage. In the larvae stage, the caterpillar eats leaves and grows fatter until it is ready to change into a butterfly. As it grows, it molts or sheds it skin. When the caterpillar is big enough to change again, it forms a chrysalis around itself. This is the pupa stage. Inside the chrysalis, the caterpillar changes for the last time. This is called metamorphosis. When the caterpillar has changed into a butterfly, it breaks out of the chrysalis and flies away. Starting out as a caterpillar eating leaves means that the caterpillar isn't competing for food with adult butterflies. This helps give the caterpillar time to grow up and survive to become a butterfly. Let's go look at the exhibit now! |

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
| --- | --- | --- |
| Before Reading | *Teacher's Note: This text and the first few pages of* A Butterfly is Patient *will be read together before completing the daily task.*<br><br>*Focus students' attention to the Anchor Chart created on day 1 of this unit.* | |

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| Show a picture on pages 24-25<br><br>Turn back to pages10-11<br><br>Read the top left portion of page 10. | *Teacher's Script: We have learned about the life cycle of mammals. Mammal babies are so cute because they are usually just a smaller version of the adult. They may grow a lot and learn a lot from their parents, but their structures do not look drastically different from the adult of their species.*<br><br>*Today, we are going to learn about a life cycle that includes a lot of changes to the structure of the animal. It is called metamorphosis.*<br><br>*Let's read and see if we can figure out kinds of structure changes happen during metamorphosis and how those changes help the animal to survive (function).*<br><br>How does the author explain metamorphosis?<br><br>What do you think that means: "a change to the animal's body structure?"<br><br>(This is an opportunity for a collaborative talk structure.)<br><br>*Teacher's Note: Reread the phrase, "before young animals go through metamorphosis, they look very different from their parents."*<br><br>How do the illustrations help us understand these words?<br><br>*Teacher's Note: Draw attention to the newt's life cycle at the bottom of page 10. Explain this life cycle. Read the captions for the newt life cycle.*<br><br>This is different than the life cycle of a mammal. What are the stages of a newt's (amphibian) life cycle? | The author says that metamorphosis is a change to the animal's body structure.<br><br>It means that the animal's body changes.<br><br>The first illustration shows a baby newt. The baby looks like a tadpole, but the adult newt looks more like a frog. The text says that young animals do not look like their parents.<br><br>This life cycle begins with an egg laid in water. Next, the newt hatches into a larva. It has gills for breathing underwater. As the newt grows, its gills shrink and it grows lungs. Eventually, the gills disappear. The newt develops legs and a tail. After that, it moves to live on land near the water. |

| | | |
|---|---|---|
| | How is this different from a mammal life cycle?<br>  <br><br>In the text, the author says metamorphosis helps the species survive because the young live in a different environment than the adult. How could living in a different environment help protect a baby animal?<br><br>How do the illustrations help us to understand what environment the newt lives in during different stages of the life cycle? | A mammal begins life by being born alive, and its parent stays with it. The mother gives it milk and teachers the baby survival skills. The newt begins life by hatching from an egg and is on its own to survive in the water. It eats food in the water rather than milk from its mother.<br><br>The baby animal might be safer living in a different place than the adults.<br><br>A newt larva lives in the water. It is so small that it could hide in the water, but it couldn't hide as well on land.<br><br>In some of the pictures, the newt has a tail like a fish that shows how if survives in the water, but then it grows legs to walk on land in other stages. |
| Read the top right paragraph on page 10 and the butterfly life cycle on page 11 | The author says that metamorphosis helps the young animals because they do not have to compete for the same food as adults. What does the author mean?<br><br>Explain metamorphosis.<br>  <br><br>*Teacher's Note: Add to the anchor chart begun on the first day.* | Maybe if the caterpillar only eats leaves, it doesn't get in the way of the adult butterfly when it sips nectar. The newt eats plants in the water rather than what the adult newt eats.<br><br>Metamorphosis is when the baby changes into its adult form. For example, the newt grows lungs, legs, and a tail. The butterfly changes inside the cocoon from a caterpillar into a butterfly. |

## *A BUTTERFLY IS PATIENT* – READING 1, QUESTION SEQUENCE 1, DAILY TASK 6

| TEXT |
|---|
| **Text:** *A Butterfly Is Patient*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Interactive Read Aloud |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| 1040L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure is very complex. The structure of the text is unconventional; it does not follow the typical left to right progression. The descriptive headings of each section are written in cursive, which may be difficult for younger readers. The book starts with the life cycle of the butterfly, moves to descriptive characteristics and adaptations of the butterfly, and returns to the life cycle with "a butterfly is patient." | The language features are very complex. The text includes many Tier III vocabulary words: pollinate, nectar, species, predators, environment, migrate, chrysalis, metamorphosis, and molt. Personification is also used to describe the butterfly as patient, creative, and a traveler. The text contains many complex sentences. The book begins: *It begins with an egg beneath an umbrella of leaves, protected from rain, hidden from creatures that might harm it … until the caterpillar inside chews free from its egg-casing, tiny, wingless, hungry to grow.* |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of the text is slightly complex. The purpose is to expose students to the life cycle of the butterfly, along with adaptations and characteristics that allow the butterfly to survive during its life cycle: molting, metamorphosis, helps pollinate, uses wings for camouflage, uses tongue for drinking, uses the wings, and travels for warmth and to lay eggs. | The knowledge demands for this text are moderately complex due to: geographic references (Afghanistan, Canada, Mexico), measurements used to describe the butterfly, and the understanding of the life cycle of a butterfly. |

## LESSON OBJECTIVE(S) FOR THIS READING

For this reading of *A Butterfly is Patient*, the lesson objectives are to introduce students to the first three stages of a butterfly life cycle: egg, caterpillar, and pupa.

In today's reading, students will:

- use information gained from illustration and the words in a text to explain and describe the butterfly life cycle: egg, caterpillar, pupa;
- cite evidence to support their developing thinking about each of the life cycle stages;
- read and make meaning of the butterfly life cycle stages;
- recount or describe key details from *A Butterfly is Patient*; and
- participate in collaborative conversations with varied peers about the butterfly's life cycle.

## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- emerge (implicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- life cycle
- larva
- compete
- chrysalis
- molt

## DAILY TASK

See task for *What is a Life Cycle?*

## POSSIBLE STUDENT RESPONSE

See task for *What is a Life Cycle?*

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note: These pages and* What is a Life Cycle? *will be read together with the same daily task.*<br><br>*Connect information about butterflies from the text* What is a Life Cycle?<br><br>*Explain that today we are going to read from a different text to compare the information from a previous book about life cycle of the butterfly.* | |
| Read "A Butterfly is Patient" (beginning) | The author says, "an umbrella of leaves." What does this mean? Why is this important?<br><br>How does the illustration on this page help us understand how a butterfly egg is protected? | It means the leaves are like an umbrella above the egg that protects it from rain and creatures. An egg needs to be protected so it can eventually hatch.<br><br>I can see the egg on the leaf and the words tell us that the egg is tiny and hidden on a leaf. |
| Read "A Butterfly is Creative" | *Teacher's Note: Show students how the labels go up the stem of the plant.*<br><br>In what ways is the illustrator helping understand the life cycle of a butterfly?<br><br>How does the caterpillar survive?<br><br>Why does the butterfly molt?<br><br>(This is an opportunity for a collaborative talk structure.)<br><br>In what ways does the chrysalis protect the caterpillar during the pupa stage? Why is this important? | The illustrator is showing us the changes that happen to a caterpillar as it becomes a butterfly. We can see the chrysalis. We can see the number of days for each stage of the butterfly life cycle.<br><br>The caterpillar eats leaves and grows bigger.<br><br>A caterpillar molts because it is growing bigger. Its skin isn't big enough to cover the growing caterpillar.<br><br>A chrysalis is the protective coating on the outside of the caterpillar while it grows wings. It is important because the caterpillar cannot protect itself while it is growing wings. The chrysalis is a safe place to grow wings. |

| | | |
|---|---|---|
| | How is metamorphosis important to a butterfly?<br><br>How does this information compare to the book *What is a Life Cycle?*<br><br>  <br>*Teacher's Note: Review the butterfly life cycle chart from egg to pupa. Ask students to help label how the butterfly protects itself at each stage. If necessary, go back to the illustrations or reread section of the text.* | Metamorphosis is important to a butterfly because it lets the caterpillar change into a butterfly. The caterpillar eats leaves and an adult butterfly sips nectar. The caterpillar doesn't have to compete for food with the adult butterfly.<br><br>The life cycle of the butterfly is the same in both books. |

## *A Butterfly Is Patient* – Reading 2, Question Sequence 2, Daily Task 7

### TEXT

**Text:** *A Butterfly Is Patient*

**Question Sequence:** Second Read

**Instructional Strategy:** Interactive Read Aloud

### LESSON OBJECTIVE(S) FOR THIS READING

The lesson objectives for this second read of *A Butterfly is Patient* are for students to understand that butterflies have behaviors and traits that help them to survive.

In today's reading, students will:

- cite evidence to support their developing thinking about how characteristics of a butterfly help it to protect itself and survive within each of the life cycle stages;
- read and make meaning of how butterflies have many protections from predators;
- describe how illustrations contribute to making sense of the butterfly survival skills;
- recount or describe key details from *A Butterfly is Patient* as it is read aloud; and
- participate in collaborative conversations with varied peers about the text and the behaviors and traits that help butterflies survive.

### VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- migrate (implicit)
- scales (explicit)
- camouflage (explicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- chrysalis
- emerge
- larva
- life cycle
- metamorphosis
- molt
- predators

## DAILY TASK

Pretend that you have just become a butterfly. When you were a caterpillar, you had a friend, a ladybug. Write a letter to your friend explaining how exciting it is to be a butterfly, how you protect yourself, and how you survive.

- Choose a type of butterfly (from our book, *A Butterfly is Patient*) to pretend to be.
- Explain to your friend how you protect yourself and what predators you face.
- Use evidence from the text to tell your friend about your new life.
- Be sure to include details to describe your actions, thoughts, and feelings.

Note: You can give yourself a nickname if you want. For example, you pretend to be a Pipevine Swallowtail. Your nickname could be Pip.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

## POSSIBLE STUDENT RESPONSE

Greetings, Dear Friend!

How are you? You will not believe it, but I have changed into a beautiful butterfly! I am called a Pipevine Swallowtail, but you can call me Pip. You know how I always ate those poisonous plants? They have helped keep me safe from predators now that I am not living on plants anymore. The reason why all that eating keeps me safe is because I am now poisonous to most birds and insects. They see my beautiful dark blue and black wings and know that I am not good to eat. Being a butterfly is very exciting! One thing I have to be careful about, though, is I need to keep warm. I have these teeny, tiny scales that absorb the sun and keep my body temperature at 86 degrees. I enjoyed being a caterpillar, but I love being a butterfly!

Sincerely,
Pip

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| "A Butterfly is Creative" | *Teacher's Script: We are going to read different parts of our text today. As we read, I want you to be thinking about what actions or characteristics a butterfly uses to help it survive.*<br>*Review the first three stages of a butterfly's life cycle. After reading, "A Butterfly is Creative," add the next stage, "adult."* | |
| Read "A Butterfly is Protective" | How does the illustration of an owl butterfly help us understand the eyespot the author talks about?<br>In what ways could these eyespots help an owl butterfly to survive? Give an example.<br>*Teacher's Note: If students struggle, reread the text and draw their attention to the illustration.*<br>  (This is an opportunity for a collaborative talk structure.)<br>*Teacher's Note: Reread the second page in "A Butterfly is Protective."*<br>How does the orange Leaf butterfly keep safe from predators?<br>What kind of predators might butterflies have? | The illustrator helps us to see that the two big circles look like big eyes.<br>An owl butterfly's wings have eyespots which could scare away predators. If the eyespot scares predators, the owl butterfly won't be eaten. If the eyespot on the owl butterfly attract mates, then they can reproduce and the life cycle will continue.<br>The orange Leaf butterfly has wings that look like brown leaves, so it can hide among other brown things like brown leaves. This butterfly uses camouflage.<br>Birds, insects, and lizards could all be predators for a butterfly. |
| Read "A Butterfly is Poisonous" | What are other ways a butterfly can survive and protect itself from predators?<br>How does a butterfly become poisonous? | Some butterflies have bright colors on their wings that signal to predators that they are poisonous. If those predators try to eat the butterfly, they will get sick and maybe die.<br>As growing caterpillars, these types of butterflies eat poisonous plants that make them poisonous as adults. |

| | | |
|---|---|---|
| Read "A Butterfly is Scaly" | How does the illustrator help us understand what "scales" are?<br><br>How do scales help a butterfly survive? | The illustrator makes it look like there is a magnifying glass which shows a close-up view of the butterfly's scales. This help us picture what they look like.<br><br>Without scales, a butterfly's wings would be transparent. The patterns of scales attract mates, so the butterfly can reproduce. The scales can also keep a butterfly's flight muscles warm. Butterflies need to keep a body temperature of 86 degrees. |
| Read "A Butterfly is a Traveler" | How do the author and the illustrator help us understand the word "migrate?"<br><br>Why is it surprising that Monarch butterflies fly 3,000 miles from Canada to Mexico?<br><br>How does migration help a butterfly to survive? | The author made the title say "A Butterfly is a Traveler," which lets us know that butterflies travel somewhere new. The illustrator created pictures of many butterflies flying high over land to show what "migrate" means.<br><br>Monarch butterflies weigh only as much as a rose petal. 3000 miles is a long way for such a small butterfly to travel. Other butterflies only migrate a short distance.<br><br>A butterfly needs to be in a warm place so their body temperature stays at 86 degrees. If a butterfly stayed in a cold place, they could die. |
| Read "A Butterfly is Magical" | How does migrating north from Mexico help the life cycle of a Monarch butterfly to continue?<br><br>*Teacher's Note: Review the butterfly life cycle chart from egg to adult. Add new information that has been learned from the text about how a butterfly protects itself. If necessary, go back to the illustrations or reread section of the text.* | The Monarch butterfly lays eggs in North America. When the Monarch butterfly reproduces, the life cycle continues. |

## *MY AWESOME SUMMER BY P. MANTIS* – READING 1, QUESTION SEQUENCE 1, DAILY TASK 8

| TEXT |
|---|
| **Text:** *My Awesome Summer by P. Mantis*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Shared Reading |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| 470L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure is slightly complex. While the organization is in the form of journal entries, the clear chronology of the narrative is easy to understand. The illustrations support the meaning of the text by providing visuals of the action in the narrative. | The language features are moderately complex. Personification is used throughout as the praying mantis tells the story in first person. The language is largely conversational, with a few words that might need explanation: shed, pipsqueak, razor arms, aphids, and egg case. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of the text is slightly complex. The journal entries are used to describe the life cycle of the praying mantis, from emerging from the egg to death after laying her own eggs in the fall. | The knowledge demands for this text are moderately complex. Most students are probably unfamiliar with the life cycle of the praying mantis or even what a praying mantis is. The author also uses an allusion to Jiminy Cricket. |

## LESSON OBJECTIVE(S) FOR THIS READING

Students will understand the life cycle of the praying mantis from her point of view – from egg, to multiple sheddings, to growing wings, to laying eggs, to finally dying.

In today's reading, students will:

- cite evidence to support their developing thinking about the life cycle of a praying mantis;
- identify and explain how the illustrations in a text help them understand the life cycle of a praying mantis;
- explain and describe how the main character, P. Mantis, responds to challenges;
- understand how this story structure (diary entries) impacts the reader;
- notice that the story is told from the point of view of the praying mantis; and
- recall information from experiences or gather information from provided sources to answer a question.

## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- aphids (implicit)
- shed (implicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- molt ("shed my skin")
- emerge
- camouflage (inside cover page) (within text – "cool trick")

## DAILY TASK

Using the text, create an explanatory paragraph that shares how the author and the illustrator help us understand the life cycle of the praying mantis and how it survives so the life cycle can continue. Before writing, talk to your partner about how the author used diary entries to tell the story of P. Mantis.

Your writing should:

- introduce the topic;
- use facts to provide information; and
- provide a concluding statement or section.

*Teacher's Note: The student could take notes on a sticky note to capture their partner discussion prior to writing.*

| POSSIBLE STUDENT RESPONSE |
|---|
| The author created a fictional character named P. Mantis to help us understand the life cycle of the Praying Mantis. During each stage of P. Mantis's life he journals what he is doing based on the actual stages in a praying mantis' life cycle (i.e., praying mantises are actually born in an egg sac.) They really do eat aphids and each other. Young praying mantises do not have wings. All praying mantises can hide by acting like a stick. The author/illustrator drew pictures that show how the praying mantis sheds its skin as it grows. The author also includes what predators praying mantises have such as dogs, spiders, and bats. The author and illustrator did a good job. |

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note: Discuss the structure of the journal. Point out how the dates are listed and what happens each day is underneath.* | |
| Inside cover<br>Praying mantis facts | *Teacher's Script: The beginning of this fiction book has something very a little different. It is a page that has several facts about the praying mantis.*<br><br>Why do you suppose the author has included this in the book?<br><br>  (This is an opportunity for a collaborative talk structure.)<br><br>This author is also the illustrator. What clues does the author/illustrator give that this book is written from the praying mantis' point of view?<br><br>Why might this type of writing style be interesting to the reader? | Maybe the author wants the reader to know some facts about the praying mantis before reading the book so the reader can understand what is happening in the story.<br><br>He put speech balloons by some of the pictures showing the praying mantis talking.<br><br>The reader might feel as if he or she is there with the praying mantis. It feels more personal. |

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| Pages 1-3<br>May 17 and May 18 | What do we learn about the praying mantis' birth from these diary entries?<br>  <br>What do you suppose the author is telling you about this stage of the insect's life cycle | A praying mantis egg is inside an egg case that holds about 150 eggs.<br><br>They hatch from an egg case. Right after praying mantises hatch, they are brown, very small, and cannot fly. |
| Pages 4-7<br>May 19 - May 24 | How are aphids important to praying mantis' survival and growth?<br><br>*Teacher's Note: Providing background knowledge or drawing comparison between aphids and lice may be helpful after students answer the question.*<br><br>How much time passes between these two entries? How do you know?<br><br>How does P. Mantis protect herself from birds? | Aphids are important food for a growing praying mantis.<br><br>From May 19 to May 25, five days pass. There are dates that have been skipped and there are a lot fewer aphids on the plants which could show that the praying mantis has eaten many of them.<br><br>She stays very still so she looks like a stick. |
| Pages 8-9<br>June 2 - June 4 | How does the author make us laugh?<br><br>How is P. Mantis surviving?<br><br>In what ways does the illustration at the bottom of the June 4 entry show us what it means to shed skin? Why does P. Mantis shed her skin?<br><br>What word did we use to describe when a butterfly removes its skin? *(Reread that section from* What is a Life Cycle? *or* A Butterfly is Patient*, if needed)* | The author makes us laugh by the way the P. Mantis tells the story. She makes it sound like she knows that eating brothers and sisters is wrong, but she is going to eat them anyway.<br><br>P. Mantis is surviving by eating aphids and other praying mantises.<br><br>The illustration helps us see that the mantis is shedding or removing its skin. She does this because she is growing, and the old skin can no longer hold her bigger body.<br><br>We used the word "molt," which means the same thing as shedding. |

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| Pages 10-11<br>June 27 | In this humorous way the author is writing, what can we learn about this stage of mantis' life cycle?<br><br>Explain how the "cool trick" helps protect the praying mantis from predators. What predator do we see in the illustration? | The praying mantis still does not have wings and cannot fly, but it is starting to change color from brown to green. It is also getting larger.<br><br>The praying mantis is the same color as the plant, which means that she is using camouflage to hide. She also stays very still, so she looks like a small stick. This means that predators think she is a small stick and leave her alone. |
| Page 12 | How do P. Mantis' "razor arms" help her survive? | P. Mantis' arms have sharp blades on them which help her to grab onto her food, even food like crickets, which are a little bigger than she is. She eats these insects so she can grow. |
| Pages 14-15<br>July 17 and July 19 | Read with your partner and discuss what these two entries tell us about the praying mantis' growth.<br><br>How much time has passed in the mantis' life? How do you know?<br><br>What has happened in its life during this time? | These two entries tell me the mantis is growing because it says she sheds her skin again. I also know the mantis is eating her siblings, which may also cause her to grow.<br><br>Two months and two days have passed; the mantis was born on May 17, and now it is July 19.<br><br>The praying mantis has hatched, eaten aphids and other praying mantis, and shed her skin. |
| Pages 16-18<br>July 27 and August 2 | What new information from this fiction text can we connect what we know to be true about an insect's life cycle?<br><br>We have learned about mammals, newts, and butterflies and their life cycles. How is a praying mantis the same or different as those other species? | Insects often shed their outer shell or skin as they grow. This is called metamorphosis new skin is soft and must harden.<br><br>The praying mantis is like the newt and the butterfly because it hatches from an egg. It molts like a butterfly. It is different from a newt and a butterfly in that the larva stage looks a lot like the adult. It is different from mammals because it hatches from an egg and mammals are born alive. |

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|---|---|---|
| Pages 19-22<br><br>August 9 and August 15 | How has the mantis changed? Why is this important? | The mantis now has wings. She can fly away from predators and find more food. |
| Page 24<br><br>August 25 | How much time has passed in the mantis' life? How do you know?<br><br>What has happened in its life during this time? | Three months and eight days have passed; the mantis was born on May 17, and now it is August 25.<br><br>The praying mantis has been born, eaten aphids, shed its skin, hatched, and grown wings. |
| Pages 25-26<br><br>Sept. 5 - Sept. 25 | What new information do we learn about the mantis' growth?<br><br>What does this tell us about the praying mantis?<br><br>Using what you know about other life cycles, why would the mantis say that she is looking for the perfect branch? Tell your partner. | The mantis shed its skin eight or nine times over the summer.<br><br>It has gotten bigger each time that it has shed its skin.<br><br>The mantis could be looking for a place to lay eggs, just like the butterfly hid its eggs in an umbrella of leaves. |

| | | |
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| Pages 27-29<br>Oct. 14 and Oct 17 | What do you think will happen next when the eggs hatches? | Another life cycle will start after the eggs hatch. Also, the mantis dies after laying eggs. |
| | What would happen if the praying mantis did not lay eggs? | If the praying mantis did not lay eggs, then new babies would not hatch, and the life cycle would not continue. |
| | How did the author use the mantis' point of view to tell this great story? | The author gives the praying mantis personality by telling the story this way. This point of view makes us enjoy the story more. |
| | What did the author have to know about an insect's life cycle in order to write this story? | The author had to have accurate information about what the praying mantis actually did during its short life span. |
| | What are some examples from the text? | One example was when the book said on page 8 and 9, "I ate one of my brothers. Okay, maybe two. I ate another brother. And one of my sisters too." The author would have to know that as praying mantises grow one of their behaviors is to eat other weaker praying mantises in order to survive. |
| | Give an example of how the author informed the reader in a humorous way about the praying mantis' structures and **behaviors** that help it survive (**function**). | It is really funny to hear the praying mantis say that she eats her brothers and sisters. This is a fact about praying mantis' behavior, but it is funny when the author tells it this way. |

## *INTO THE SEA* – READINGS 1, QUESTION SEQUENCES 1, DAILY TASK 9

| TEXT |
|---|
| **Text:** *Into the Sea*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Interactive Read Aloud |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| 790L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure is moderately complex. *Into the Sea* traces a chronological progression of the life of one sea turtle. However, connections from hatching through various stages of the life cycle are implicit. The text also gently introduces the concepts of the food web and endangerment. The vivid illustrations are detailed and enhance understanding of the text. | The language features are very complex. The text contains subject-specific vocabulary that might be unfamiliar to some readers, including a variety of sea creatures and words like burrows, current, hatchling, marine, and surface. The lyrical, detailed sentences are complex. (For example: "She is not much bigger than a bottle cap and would make a good meal for a hungry sea bird or a crab. But at this moment, at dawn, the crabs are resting in muddy burrows and the beach is quiet and empty.") The text also uses onomatopoeia such as *tap, scritch, thump, scrape, whoosh, and wheeze* to illustrate the sounds the turtles make. |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of the text is moderately complex. The stages of the life cycle of a sea turtle are implied but easy to identify based on the supportive text and illustrations. Readers will also have subtle exposure to the perils the turtle must face throughout its life. | The knowledge demands for this text are moderately complex, although the text is dense and extensive in content. The author's note at the back, however, is a bit more involved, fact-heavy, and advanced in scope, and thus is perhaps more suitable for older readers (or older listeners). |

## LESSON OBJECTIVE(S) FOR THIS READING

Students will learn about the life cycle of the sea turtle and how its instincts support their survival and continue the life cycle. Students will consider other species' life cycles and how they survive to continue their life cycles.

In today's reading, students will:

- cite evidence to support their developing thinking about the life cycle of the sea turtle and how its instincts support their survival;
- describe how words and phrases supply meaning related to the life cycle of sea turtles;
- write narrative diary entries to explain connections among processes in the life cycle of sea turtles;
- participate with varied peers and adults in collaborative conversations in small or large groups about the life cycle of the sea turtle and how its instincts support their survival; and
- recount or describe key ideas or details from *Into the Sea* or information presented orally or through other media.

## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- hatchling (explicit)
- leathery (embedded)
- current (embedded)
- instinctive (also instinct(ly)) (explicit)
- familiar (explicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- life cycle
- camouflage

## DAILY TASK

Imagine you are a sea turtle.

1. Draw the sea turtle life cycle.

2. Write three short diary entries as if you were the sea turtle:

- first, write about when you were born;
- second, write how you survived as a baby sea turtle; and
- third, write about how you survived dangers as an adult.

Be sure to use vocabulary words, such as hatchling, current, or instinctive.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

| POSSIBLE STUDENT RESPONSE |
|---|
| Birth: Crack! Here I am! I am a newborn hatchling. I instinctively know how to climb out of my nest to the sandy beach. Whew! I am already tired, but he moonlight calls to me, so I follow the moonlight to the ocean. The water feels so good, and I can see better. I feel very small in such a big ocean, but diving is fun. Thank goodness my tummy is white like the white surface of the ocean, or those barracudas would eat me.<br><br>Young Sea Turtle: I am so excited that I am growing and so is my shell. I notice that I can swim faster now, but I still drift away in strong currents. I was eating plankton the last time a current just pulled me away. Right now, I am hiding under a ledge. I have to be careful because I cannot pull my head and tail into my shell like I hear land turtles can.<br><br>Adult Sea Turtle: I am finally grown. Growing has taken forever! Mama would be proud. I can swim so fast now that I can swim away from most dangers. Today was a little bit scary. First, I swam away from a really mean-looking shark and then was caught in a fishing net. Luckily, I was able to find a way out, and now I am swimming in a current that smells familiar. I like it. I hope to lay my eggs soon. |

| PAGE/PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note: Before reading, remind students that we have been reading about mammal and insect life cycles up to this point, and now we are going to read about a sea turtle life cycle (a reptile). If using an anchor chart or semantic web to record the similarities and differences in life cycles, review them now.*<br><br>How might a sea turtle's life cycle be different from the mammal or insect's life cycle?<br><br>(This is an opportunity for a collaborative talk structure.) | *Teacher's Note: Students discuss the different animal life cycles studied so far with partners or small groups. Teachers should listen in on student conversations and hear vocabulary words like egg, larva, hatch, pupa, mammal, etc.* |

| | | |
|---|---|---|
| | Give an example of how a mammal is born. | A baby giraffe is born by coming out of its mother. The mother is there to clean the baby giraffe and give it milk. The mother teaches the baby giraffe how to survive. |
| Page 1 | What words does the author use to describe the hatching of the sea turtle?<br><br>What details does the author use to describe the baby sea turtle's size?<br><br>In what ways does being so small put the baby sea turtle in danger? | The author uses sound words – "tap" and "scritch" (onomatopoeia) to help us "hear" the sound of the baby sea turtle hatching.<br><br>The author says that the baby sea turtle is the size of a bottle cap. This means that the baby is very small.<br><br>The small size of the baby sea turtle could make it easy for a bird or crab to eat it. The baby sea turtle has to cross the sandy beach out in the open where they might see her. |
| Page 3 | How do the baby sea turtle's behaviors help it survive?<br><br>*Teacher's Note: Reread "A crab pops out of its burrow and sees the dark moving shape. Just in time, the turtle reaches the edge of the water. A gentle wave splashes across her back and carries her into the ocean."*<br><br>How does the illustration help us understand how the sea turtle escapes from the crab? | The sea turtle travels at night when predators are not active. She instinctively knows to go toward the moonlight. The moonlight is bright and shines on the ocean, so she will if she goes toward the moonlight she will reach the water.<br><br>The illustrator draws a crab trying to grab the baby sea turtle. We can see the water barely reaching the turtle, so we know that she escaped, but it was close. |
| Page 4 | What physical characteristics do sea turtles have that support survival in the ocean? | The ocean surface is white, and her belly is white, so it looks like the turtle and the ocean are the same. This is camouflage. The barracuda and other fish cannot see the small turtle. |

| | | |
|---|---|---|
| | How does this help the sea turtle survive?  | This helps the sea turtle because she is still tiny and the big fish, like the barracuda, could eat her. |
| Pages 6-7 | In what ways is the baby sea turtle protecting herself while she is growing? | The baby sea turtle rides on a patch of sargassum weed. This camouflages the sea turtle, so birds and big fish cannot see her. She can also eat plankton. Her shell grows bigger and harder. |
| Page 8 | How does the sea turtle survive during her first winter? | The sea turtle stays in a tropical sea where she has lots to eat. She hides under ledges when she is in danger because she cannot pull her head and neck into her shell. |
| Pages 10-11 | What has changed now that the sea turtle is older? How does this help her survive to continue the life cycle? | She is as big as the sea birds and most fish, so they cannot eat her and are not a danger to her anymore. She has developed strong swimming muscles and swims faster. This means that she can keep growing and continue the life cycle. |
| Page 17 | Now that the sea turtle is older, how is she able to survive dangers in her environment?  What does it mean when the author says, “she finds a current that seems familiar to her and follows it back across the ocean”? | The adult sea turtle is 300 pounds and is a strong swimmer. She is able to hear dangers like a humpback whale and is strong enough to swim swiftly away from the whale’s bubble net. To go forward means to move toward a place. To go back means back to a place you have been before. The author is helping us understand that the sea turtle has been on this current before and that it is taking her back to a place she has been to before. |
| Pages 18-19 | Who or what is a danger to the sea turtle on this page? How do you know? | Humans are a danger to the sea turtle when they use big fishing nets to capture sea turtles and other fish. I know because the fishing net is man-made. |

| | | |
|---|---|---|
| Pages 20-21 | How does mating with a male turtle help the life cycle to continue?<br>  | If the sea turtle didn't mate, the life cycle would stop, and no baby sea turtles could be born. |
| Page 22 | *Teacher's Note: Reread "The turtle seems to know that she has come back to the same island where she was born."*<br>Here's the word "back" again. How does this word help us understand that the sea turtle was born here a long time ago?<br><br>We talked about the word "instinctive" before and as we read this book. How does doing something instinctively help the turtle survive to continue the life cycle? | The word "back" reminds the reader that the sea turtle has been here before. It means she has returned to a place.<br><br>Instinctive means that the sea turtle just knows to do something without having to think about it. Being instinctive helps the sea turtle follow currents and return to her birthplace to lay eggs and continue the life cycle. |
| Pages 26-27 | What is the life cycle of the sea turtle?<br>*Teacher's Note: Add information (e.g., birth, growth, reproduction, danger/predators, protections) about sea turtles to anchor chart on life cycles as you discuss with students.*<br><br>How is a sea turtle's life cycle different from the mammals we read about?<br><br>How does the sea turtle's instincts help its survival and keep the life cycle going? Support your thinking with evidence from the text. | The sea turtle hatches from an egg laid on a beach. After hatching it heads toward the ocean. It takes years for a sea turtle to grow into adulthood. It mates and lays eggs on the beach where it was born. The predators of a sea turtle are sharks, fish, whales, humans, and birds. Some of the protections the sea turtle has is the white belly for camouflage and the shell which blends in with sargassum weeds, as well as its size and swimming speed.<br><br>The sea turtle hatches from an egg. The mother sea turtle is not there to give the baby sea turtle milk or teach the baby sea turtle how to survive.<br><br>When the sea turtle is born, it moves from the nest to the sea when it is dark so that predators won't see it. While the sea turtle is a baby in the ocean, it uses sargassum weed and rocks to hide in. When predators like sharks and whales are around sea turtles, they swim away quickly. They instinctively know to return to the place that they are born, to mate, and lay eggs. |

| | | |
|---|---|---|
| | | They do all of this without the mother sea turtle teaching them. |
| After Reading | *Teacher's Note: As students prepare to write diary entries, the teacher might want to refer back to My Awesome Summer's diary entry format. Students will need time to talk and listen to a peer about their plans for what they will write.*  | |

## *SEA TURTLES* - READING 1, QUESTION SEQUENCE 1, DAILY TASK 10

| TEXT |
|---|
| **Text:** *Sea Turtles*<br><br>**Question Sequence:** First Read<br><br>**Instructional Strategy:** Shared Reading |

| TEXT COMPLEXITY ANALYSIS | |
|---|---|
| **QUANTITATIVE COMPLEXITY MEASURES** | |
| 600L | |
| **QUALITATIVE COMPLEXITY MEASURES** | |
| **TEXT STRUCTURE** | **LANGUAGE FEATURES** |
| The text structure is moderately complex. It provides a general descriptions of sea turtles, then highlights unique characteristics (structures and behaviors) between eight different species of sea turtles. The authors also explain the steps in a sea turtle's life cycle, including threats to the sea turtle's life cycle, and the population. | The language features are moderately complex. The text is largely explicit and easily understood. Readers will encounter some academic vocabulary specific to sea turtles and reptiles such as "cold-blooded", "flippers", or "clutch." |
| **MEANING/PURPOSE** | **KNOWLEDGE DEMANDS** |
| The purpose of this nonfiction text is slightly complex. The title, illustrations, and text contain one major purpose: explain and describe sea turtles, their habits, life cycles, protections, and predators. | The knowledge demands are slightly complex. Minimal background knowledge of sea turtles is needed for comprehending this text. Most of the knowledge a reader would need is provided within the text. |

| LESSON OBJECTIVE(S) FOR THIS READING |
|---|
| The lesson objectives for this reading of *Sea Turtles* support an understanding of how sea turtle structures and behaviors contribute to survival (function). Students will compare and contrast the threats humans pose to the survival of sea turtles to bats and how to alter human behavior for the future. |

In today's reading, students will:

- cite evidence to support their developing thinking about how sea turtle characteristics and behaviors help them survive;
- read and make meaning of *Sea Turtles*;
- participate with varied peers and adults in collaborative conversations in small or large groups about threats to a sea turtle's life cycle; and
- recall information from experiences or gather information from provided sources to answer questions related to the structures and behaviors that support survival.

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## VOCABULARY WORDS

The following words are introduced during this reading. Suggested instructional methods are included in parentheses.

- extinct (explicit)
- clutch (embedded)
- nesting beach (implicit)

The following words are reinforced during this reading. Suggested instructional methods are included in parentheses.

- current
- predators ("Enemies attack her or her eggs")
- current
- migrate

## DAILY TASK

Both bats' and sea turtles' survival is threatened by humans. Students will write an informative paragraph that compares and contrasts the threats humans pose to the survival of sea turtles to bats and make suggestions for changing human behavior in the future.

Your writing should:

- introduce your topic;
- develop the topic with facts, definitions, and details;
- use linking words and phrases to connect ideas;
- use precise language from the vocabulary you studied while learning about animals' internal/external structures and their functions; and
- provide a conclusion to provide closure for your readers.

| POSSIBLE STUDENT RESPONSE |
|---|
| Bats and sea turtles face threats to their survival from humans. The number of bats and sea turtles is decreasing for different reasons. People don't like bats and destroy their habitats. Pollution and pesticides also kill bats. Humans hunt sea turtles for their eggs, meat, and shells. People want to enjoy the beaches where sea turtles lay their eggs reducing the number of spots to lay eggs. However, many people are doing things to save bats and sea turtles, such as providing bat houses and protecting areas where turtles live and bury eggs. Bats and sea turtles need our help to survive. Please help save these animals that are important to everyone. |

| PAGE/ PART OF TEXT | QUESTION SEQUENCE | EXEMPLAR STUDENT RESPONSE |
|---|---|---|
| Before Reading | *Teacher's Note: For this text, you will only read the pages that have corresponding questions.*<br>*Teacher's Script: Today, we are going to read a book about sea turtles together. In this book, we are going to learn more about the dangers sea turtles face as well as what happens to a species when their life cycle stops.* | |
| Page1 | How do we know that sea turtles are reptiles? | We know that sea turtles are reptiles because all reptiles are cold-blooded and have scaly skin. |
| Pages 12-13 | *Teacher's Note: Read the text to students. Choral read. Whisper read to a partner.*<br>How does the way the sea turtle uses its flippers differ from how the praying mantis *(page 12 in My Awesome Summer)* uses its arms? | A sea turtle uses its flippers to help it be a powerful swimmer. The praying mantis uses its razor arms to quickly grab its prey. |
| Page16 | *Teacher's Note: Ask students to think about how a sea turtle's life cycle and behaviors might be similar to other animals' or insects' life cycle or behaviors.*<br>**Where** do sea turtle lay their eggs? What connections to other animals or insects can you make about this stage in the life cycle? | The sea turtle returns to the same beach where it was born to lay eggs. The praying mantis returns to the same bush where it was born to lay its eggs. |

| | | |
|---|---|---|
| |  (This is an opportunity for a collaborative talk structure.)<br><br>How do sea turtles protect their eggs from predators? What connections to other animals or insects can you make about this behavior? | The sea turtle covers its clutch with sand in order to hide eggs from predators. The praying mantis covers its eggs with foam which hardens and makes a protective eggs case. |
| Page 17 | About how many eggs does the sea turtle lay?<br><br>From what we learned about life cycles, why would they need to lay so many eggs?<br><br>How is this different from mammals? Why is this important? | A sea turtle lays about 100 eggs.<br><br>The sea turtle would need to lay many eggs because not many babies survive to become adults and continue the life cycle.<br><br>Mammals have fewer young at one time because the mothers protect the young until it can survive on its own. The insect and reptile mothers do not stay with their babies. |
| Page 21 | How does the illustration help us know why the sea turtles hide in the sea weed? | A baby sea turtle hides from predators in the sea weed because the sea weed is the same color as the sea turtle. This camouflages the sea turtle. |
| Pages 22-23 | How have predators halted the life cycle of sea turtles? | When people take the sea turtle eggs from the clutch or eat the eggs, the babies inside die. This means the life cycle cannot continue and the sea turtle population decreases. |

## ALTERNATIVE SHARED READING OPTIONS

Other options for aligned shared reading experiences that may be more appropriate for a different point in the year include the following:

"Sea Turtle" by Philo Yan

Penguin Chick's Lullaby

Sea Turtles and Octopus Ink

**Note:** The texts selected for shared reading are intended to provide opportunities for students to practice newly acquired foundational skills, to develop reading fluency, and to build knowledge across a variety of genres. Shared reading texts should be appropriately complex text that students can read with teacher guidance and support. Teachers will need to take grade-level and time of year into account when deciding if the shared reading texts are appropriate for their students. Teachers will also need to consider students' current abilities and the pace at which students need to grow to meet or exceed grade-level expectations by the end of the year. If the shared reading texts included in the Unit Starter are not appropriate for the specific group of students and time of year, educators are encouraged to make an informed decision about selecting a different text for shared reading. The shared reading texts with question sequences in this Unit Starter are appropriate for instruction closer to the end of the academic school year. However, as you see here, different texts may be more appropriate if this Unit Starter is used at a different point in the year.

**END-OF-UNIT TASK**

**Note:** The end-of-unit task gives students the opportunity to independently answer the essential questions for the unit and to demonstrate their understanding of the unit concepts. The end-of-unit task prompts student thinking, speaking, and writing about unit texts that reflect the demands of the grade-level literacy standards. In addition, the end-of-unit task provides students a chance to demonstrate their understanding in an authentic and meaningful context.

## END-OF-UNIT TASK

You are an animal scientist at the local zoo. Your job is to teach school groups about animal life cycles and their importance to animal survival. Prepare a copy of your speech and an example of the poster you plan to use with school groups:

- You will create one poster with two different species we read about in this unit.
  - Your poster should include an illustration of the life cycle of each species.
  - Next to each stage of your species' life cycles, label the dangers, specific predators, and how each species protects itself.
  - Write your speech. In your speech, be sure to refer to the two species on your posters to explain what animal behaviors and characteristics help it survive using the unit's vocabulary whenever possible.
- Present your speech and poster to your "colleagues" as practice and feedback. When you give your speech, be sure to point out the life cycles you drew on your poster.

## POSSIBLE STUDENT RESPONSE

Good morning! Today, we are going to learn about the different stages in a butterfly's and sea turtle's life cycle. Then, we will explore how each stage in their life cycle is filled with dangers and predators. Finally, we will learn why an animal's life cycle is so important to its ongoing survival. A sea turtle begins its life as an egg in a nest on a beach. Its mother has already gone back into the ocean, so it is left alone to survive. The good news is that each hatchling instinctively knows to go toward the moonlight into the ocean. But, there are dangers already. Predators, such as birds and crabs, could eat the tiny turtle before it gets to the ocean. If it makes it to the ocean, it can see better and instinctively knows to ride on a sargassum weed, which makes it hard for fish and birds to see it. Once it grows older, it can swim fast, but it cannot pull its head or tail into its shell, so it has to hide under ledges from predators such as big mouth fish. As an adult, it is finally bigger than most fish and birds. The adult still is in danger from sharks and people. Finally, it mates and lays eggs to begin the cycle again.

A butterfly begins its life as a tiny egg laid on the underside of a leaf. The leaf protects the egg from rain and predators. Once it hatches, it grows into a caterpillar! Caterpillars are safer on the ground, but there are still dangers! Birds and other hungry animals might enjoy a juicy caterpillar as a snack. The caterpillar eats and eats leaves until it grows big enough to change into a butterfly. Before it can change into a butterfly, it forms a chrysalis around itself. The chrysalis keeps the caterpillar safe while it grows wings. This changing is called metamorphosis. Finally, the butterfly breaks out of the chrysalis and flies away. But, butterflies are still in danger from predators such as birds, lizards, and other insects. Some butterflies use camouflage to hide themselves on plants. One butterfly's wings look like brown leaves. Other butterflies are poisonous because they ate poisonous plants when they were caterpillars. Their bright colored wings tell predators not to eat them.

If any of the stages in a life cycle don't happen, then the animal will die out or become extinct.

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**END-OF-UNIT TASK RUBRIC**

**Note:** The end-of-unit task rubric is designed to support educators in determining the extent to which students' responses meet the grade-level expectations. This rubric will also help teachers analyze the extent to which each student understands the unit concepts and understandings.

Second Grade Student End-of-Unit Rubric

**Life Cycles/Survival Characteristics and Behaviors**

**Directions:** After reading and reflecting on the student work sample, score each area and total the rubric score at the bottom. Note that this rubric is designed to look at student work samples in a holistic manner.

| | Below Expectation (0) | Needs More Time (1) | Meets Expectation (2) | Above Expectation (3) |
|---|---|---|---|---|
| Content (Text-based evidence) | Creates poster with **1** life cycle with labels. Does not write a speech | Creates poster with **1** life cycle with labels for dangers, predators, and protections. Writes a speech that somewhat explains the information on their poster | Creates poster with **2** life cycles with labels for dangers, predators, and protections. Writes a speech that clearly explains the information on their poster | Creates poster with more than **2** life cycles with labels for dangers, predators, and protections. Writes a speech that clearly explains the information on their poster |
| Word Choice (Content Vocabulary) | Uses **little** science content vocabulary to explain life cycles and survival | Uses **some** science content vocabulary to explain life cycles and survival | Uses **adequate** science content vocabulary to explain life cycles and survival | Uses **insightful** science content vocabulary to explain life cycles and survival |
| Mechanics | Uses **little** punctuation and capitalization | Uses **some** punctuation and capitalization | **Mostly** uses punctuation and capitalization | **Consistently** uses punctuation and capitalization |
| Structure | **Writing omits an introduction and conclusion**, and includes **few detail sentences** | Writing **omits an introduction or conclusion**, and includes **some detail sentences** | Writing includes an **introduction, detail sentences**, and a **conclusion** | Writing includes **a clear introduction, many key details,** and a **clear conclusion** |
| Illustrations | **1 life cycle** illustration with little or no details or labeling | **2 life cycle** illustrations with limited details and limited labeling | **At least 2** life cycle illustrations are present with detailed illustrations and descriptive sentences | **More than 2** life cycle illustrations are present with detailed illustrations and descriptive sentences |

Total: _____

Above Expectation: 14-15 points

Meets Expectation: 10-13 points

Needs More Time: 5-9 points

Below Expectation: 0-4 points

*Points are not designed to be averaged for a grade.

## APPENDIX A: UNIT PREPARATION PROTOCOL

**Question 1: What will students learn during my unit?**

| Review the content goals for the unit and identify the desired results for learners. | |
|---|---|
| • What are the concepts around which I will organize my unit (*universal concept, unit concept*)?<br>• What will students come to understand through deep exploration of these concepts (*essential questions, enduring understandings*)?*<br>• What disciplinary knowledge will focus instruction and provide the schema for students to organize and anchor new words (*guiding questions, disciplinary understandings*)?<br>• Why is this content important for students to know?<br>*Adapted from McTighe, J. & Seif, E. (2011), Wiggins, G. & McTighe (2013). | |

**Question 2: How will students demonstrate their learning at the end of my unit?**

| Review the end-of-unit task and the exemplar response to determine how students will demonstrate their learning. | |
|---|---|
| • How does the task integrate the grade-level standards for reading, writing, speaking and listening, and/or foundational literacy in service of deep understanding of the unit texts and concepts?<br>• How does the task call for students to synthesize their learning across texts to demonstrate their understanding of the unit concept?<br>• How does the task call for students to use appropriate details and elaborate on their thinking sufficiently?<br>• How does the task prompt student thinking and writing that reflects the grade-level expectations?<br>• What is the criteria for success on this task? What does an excellent response look/sound like? | |

**Question 3: How will students build knowledge and vocabulary over the course of the unit?**

| Read each of the texts for the unit and consider how the texts are thoughtfully sequenced to build world and word knowledge. | |
|---|---|
| • How are the texts sequenced to build knowledge around the unit concepts?<br>• How are the texts sequenced to support students in developing academic and domain-specific vocabulary?<br>• Which instructional strategies are suggested for each text? How will I sequence them within the literacy block? | |

**Question 4: What makes the text complex?**

| You are now ready to prepare at the lesson level. To do this, revisit the individual text. Review the text complexity analysis and read the desired understandings for the reading. | |
|---|---|
| • What aspects of this text (structure, features, meaning/purpose, and knowledge) are the most complex?<br>• What aspects of the text are most critical for students to comprehend to ensure they arrive at the desired understanding(s) for the reading?<br>• Where might you need to spend time and focus students' attention to ensure they comprehend the text? | |

**Question 5: How will I help students access complex texts during daily instruction?**

| Review the question sequence and reflect on how the questions support students in accessing the text. | |
|---|---|
| • How does the question sequence support students in accessing the text and developing the desired understanding(s) of the reading?<br>• How does the question sequence attend to words, phrases, and sentences that will support students in building vocabulary and knowledge?<br>• How are the questions skillfully sequenced to guide students to the desired understanding(s) of the reading?<br>• How will you ensure all students engage with the questions that are most essential to the objectives of the lesson? (Consider structures such as turn and talk, stop and jot, etc.)<br>• How will you consider additional texts, or additional reads of the text, to ensure students fully access and deeply understand the text?<br>• Are there any additional supports (e.g., modeling, re-reading parts of the text) that students will need in order to develop an understanding of the big ideas of the text and the enduring understandings of the unit? | |

**Question 6: How will students demonstrate their learning during the lesson?**

| Review the daily task for the lesson to determine what students will be able to do at the end of the lesson. | |
|---|---|
| • How does the task require students to demonstrate their new or refined understanding?<br>• How does the task call for students to use appropriate details and elaborate on their thinking sufficiently?<br>• How does the task prompt student thinking and writing that reflects the grade-level expectations?<br>• How does this task build on prior learning in the unit/prepare students for success on the end-of-unit task?<br>• How will students demonstrate their learning during other parts of the lesson?<br>• What is the criteria for success on this task? What does an excellent response look/sound like? | |

**Question 7: What do my students already know, and what are they already able to do?**

| Consider what your students already know and what they are already able to do to support productive engagement with the resources in the Unit Starter. | |
|---|---|
| • What knowledge do my students need to have prior to this unit?<br>• What do my students already know? What are they already able to do?<br>• Given this, which/what components of these texts might be challenging? Which/what components of these tasks might be challenging?<br>• What supports will I plan for my students (e.g., shifting to a different level of cognitive demand, adding or adjusting talking structures, adding or adjusting accountable talk stems into student discussions, providing specific academic feedback, or adding or adjusting scaffolded support)?<br>• How can the questions and tasks provided in the Unit Starter inform adjustments to upcoming lessons? | |

**Question 8: What content do I need to brush up on before teaching this unit?**

| Determine what knowledge you as the teacher need to build before having students engaged with these resources. | |
|---|---|
| • What knowledge and understandings about the content do I need to build?<br>• What action steps can I take to develop my knowledge?<br>• What resources and support will I seek out? | |

## APPENDIX B: LESSON PREPARATION PROTOCOL

**Question 1: What will students learn during this lesson?**

| Review the desired understanding(s) for the reading. Then, read the daily task and the desired student response. | |
|---|---|
| • What is the desired understanding(s) for this reading?<br>• How does this desired understanding build off what students have already learned? What new understandings will students develop during this reading?<br>• How will my students demonstrate their learning at the end of the lesson?<br>• How does the desired understanding for this reading fit within the larger context of the unit? | |

**Question 2: How might features of the text help or hold students back from building the disciplinary and/or enduring understandings?**

| Read and annotate the lesson text and review the associated text complexity analysis. | |
|---|---|
| • Where in the text will students be asked to make connections to what they already know? Where in the text will students build new knowledge?<br>• What aspects of the text (structure, features, meaning/purpose, knowledge) might help or hold students back from building the disciplinary and/or enduring understandings?<br>• Where do I need to focus students' time and attention during the read aloud/shared reading? | |

**Question 3: How will I support students in accessing this text, so they can build the disciplinary and/or enduring understandings?**

| Read through the question sequence and the desired student responses. | |
|---|---|
| • Which questions are crucial and most aligned to the desired understandings? What thinking will students need to do to answer the most important questions?<br>• Which questions target the aspects of the text that may hold students back from building the desired disciplinary and/or enduring understandings?<br>• Are there adjustments I need to make to the questions or their order to meet the needs of my students while assuring students are still responsible for thinking deeply about the content?<br>• What do I expect to hear in students' responses? How will I support to students who provide partial or incomplete responses in developing a fuller response? | |

## APPENDIX C: USEFUL PROCEDURAL EXAMPLES FOR EXPLICIT VOCABULARY INSTRUCTION

Example 1:

- Contextualize the word for its role in the text.
- Provide a student-friendly definition, description, explanation, or example of the new term along with a nonlinguistic representation and a gesture.
- Provide additional examples, and ask students to provide their own examples of the word.
- Construct a picture, symbol, or graphic to represent the word.
- Engage students in lively ways to utilize the new word immediately.
- Provide multiple exposures to the word over time.

-Beck et al., 2002; Marzano, 2004

For a specific example, see the shared reading webinar presentation found here.

Example 2:

- Say the word; teach pronunciation.
- Class repeats the word.
- Display the word with a visual, read the word, and say the definition using a complete sentence.
- Have the class say the word and repeat the definition.
- Use the word in a sentence: the context of the sentence should be something students know and can connect with.
- Add a gesture to the definition, and repeat the definition with the gesture.
- Students repeat the definition with the gesture.
- Have student partners take turns teaching the word to each other and using the word in a sentence they create.
- Explain how the word will be used in the text, either by reading the sentence in which it appears or explaining the context in which it appears.

- Adapted from *50 Nifty Speaking and Listening Activities* by Judi Dodson